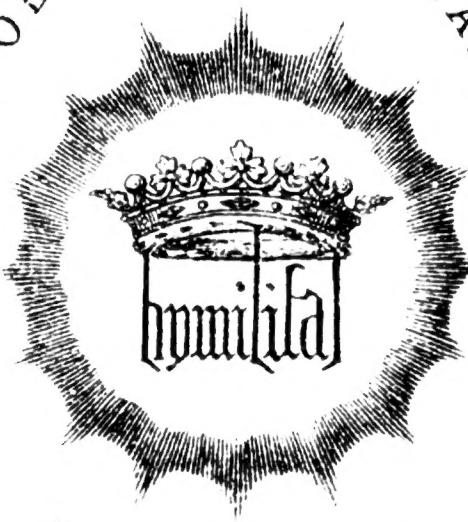


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# PALESTINE EXPLORATION FUND.

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*Quarterly Statement*

FOR 1883.

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THE  
PALESTINE EXPLORATION FUND

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NOTES AND NEWS.

THE Old and New Testament Maps are now ready. They were issued in November, and there has already been a considerable demand for them. The responsibility of identification rests with Mr. Trelawney Saunders, the editor, to whom must also be given the credit for all the information which he has conveyed with the maps. For instance, the Old Testament Map illustrates the geography not only of the Canonical books, but also that of Josephus and the Apocrypha. The Tribal Divisions, the Twelve Governments of Solomon, the Stations of the Tabernacle and Ark, the Cities of Refuge (Priestly and Levitical), the Canaanite Capitals, Rehoboam's Fortified Places, will be found on the map. By means of different tints, also, the tribes included in the different Captivities are indicated. Mr. Saunders has also added a Key to Ezekiel's Prophetic Divisions. As regards the New Testament Map it illustrates the geography of the Talmud and Josephus as well as of the Gospels. The modern names will be found under the ancient names. The heights are given in English feet. The maps are uniform in size and appearance, and when mounted are 5 feet 4 inches long and 3 feet wide.

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The price of these maps is 6s. 6d. to subscribers, carriage paid to any part of Great Britain or Ireland. This is half the price charged by the publishers to the public. It is found that the water-basins cannot be laid on them, because the maps are already fully occupied with colour used for conveying information. The sections can be had separately in sheets.

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The list of identifications of all places in Western Palestine with those adopted by Mr. Saunders and those by Captain Conder is now in preparation, and will be issued as soon as possible.

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The third volume of **Memoirs** has been delayed, but the final revise is now

passing through the press. The other two volumes may be expected in the spring. Captain Conder, who has returned from Egypt, and is now on sick leave, will, as soon as he has recovered his health, return to the service of the Committee, and has undertaken to prepare a paper for the Jerusalem volume, containing an account of all the researches and discoveries made there since Colonel Warren's excavations.

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The great work of which these volumes form part will not be reprinted, and only a few copies are left. Particulars of the price may be obtained of the Secretary. The Committee beg their friends to secure them, if possible, for libraries, so as to make them more generally useful.

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Colonel Warren is now at Suez engaged in bringing to justice the murderers of Professor Palmer and his companions. Of their fate there is now no longer room for doubt. The notice of Professor Palmer which will be found on page 4 is reprinted from the "Athenaeum." A memoir of his life is being prepared by Mr. Walter Besant: it may be expected early in the year. In his most lamentable death, the Society has suffered an irreparable loss. There is no living man who can take his place, because, though many Oriental scholars may be found, there is not one who knows so well the people of the Desert and the Holy Land, their manners, customs, and language.

---

Work in the field will be resumed as soon as possible. Meantime, Captain Conder will, it is hoped, take up again the work in which he was interrupted, of compiling the Memoirs of the part he has already surveyed. The position of the Society has been greatly improved by the issue of these Memoirs. Its objects are now widely known, and the publication of its splendid maps and the volumes of the Memoirs are at once a proof of the excellence of their past work and a pledge for the future. It is hoped that every subscriber will take a copy of the Biblical maps, if not for his own use, for presentation to schools and libraries.

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Mr. Saunders's sections of the country, viz., one from north to south, and four from east to west, have been laid down on two sheets, so that they can be had separately if desired. They are also laid down on his "Water-Basin" Map. The price of the sheets is 1s. 6d. each. The Jerusalem sheet of the great Map can also be had separately, at half-a-crown.

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The income of the Society from all sources, from September 19th to December 22nd was £783 4s. 4d.

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It is suggested to subscribers that the safest and most convenient manner of paying subscriptions is through a Bank. Many subscribers have adopted this

method, which removes the danger of loss or miscarriage, and renders unnecessary the acknowledgment by official receipt and letter.

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Subscribers who do not receive the *Quarterly Statement* regularly, are asked to send a note to the Secretary. Great care is taken to forward each number to all who are entitled to receive it, but changes of address and other causes give rise occasionally to omissions.

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While desiring to give every publicity to proposed identifications and other theories advanced by officers of the Fund and contributors to the pages of the *Quarterly Statement*, the Committee wish it to be distinctly understood that by publishing them in the *Quarterly Statement* they neither sanction nor adopt them.

## EDWARD HENRY PALMER.

(Reprinted, by permission of the proprietors, from the "Athenæum" of November 11th, 1882.)

## THE LATE PROFESSOR PALMER.

The intelligence received at the Admiralty from Colonel Warren leaves, unhappily, no room for any further hope. Palmer and his party have been murdered. They were surrounded, captured, taken into the mountains, and then, after two or three days of captivity, they were done to death. For a long time his friends sought comfort in the gleams of hope afforded by possibilities and by conflicting rumours. There was a persistent report that two Englishmen had been killed—where, then, was the third? Alas! the third Englishman was the Sheikh Abdullah, Palmer himself, whom the murderers took for a Syrian effendi. Then it was reported that an Englishman had been seen in the Northern Desert: this Englishman might be Palmer; then it was argued that because Palmer had just gone through the desert alone and unprotected, relying on his knowledge of the people and their language, no harm would happen on a second visit. "It is impossible," said one who had witnessed his power of managing natives, "that any Arab should kill Palmer." There was also the report that he had escaped with the Sheikh Meter Abu Sofieh, and had been carried into Arabia. It is now, however, certain that he is dead; he was not betrayed by any of the Arabs whose friendship he had gained on his first journey, nor was he murdered for the money he had with him, for the murderers knew nothing of it, and the money escaped them. The authors of the crime have to be sought in Cairo, Nakhl, and El Arish. That they will be duly sought and punished we entertain no doubt. The matter has been placed in the best hands; Colonel Warren is no stranger to the wily Oriental. Meantime, the only consolation for this most terrible misfortune is the thought that no soldier ever died more bravely for his country than Palmer; that no more gallant achievement has ever been recorded in history than that first journey of his in which, alone and unprotected, he turned back the tide of fanaticism, and persuaded the countless hordes of the desert to sit down in quiet and become the friends of the Feringhee. A brief record of this journey, drawn up from day to day in letters to his wife, has arrived in England. An official report was drawn up by Palmer for Admiral Seymour, and will, perhaps, some day see the light.

Edward Henry Palmer was born at Cambridge on August 7th, 1840. His parents both died when he was quite young. He was educated at the Perse Grammar School. There was no place for him at Cambridge, while an opening seemed possible in London, probably through family interest. He therefore left Cambridge and came to town, with the view

of entering upon a mercantile career. One knows little of his London life; there can be, indeed, little to tell of a young man's early work in a City house. He learnt, however, French and Italian during these years of City life.

It was in the year 1860 that he determined to give up whatever chances he had in the City of the Golden Pavement, and returned to Cambridge, where after two or three years of study, he entered himself at St. John's, Cambridge. He spent his undergraduate time in reading a great deal of Arabic and Persian, and as little Latin and Greek as possible. A third class in the Classical Tripos marked the extent of his attainments in those languages. Indeed, he never professed at all to be a classical scholar. He took his degree in the year 1867, and it is very greatly to the credit of the Society of St. John's that they recognised his Oriental studies by electing him a Fellow in the same year. This election was, indeed, an endowment of research. The first chance of visiting the East occurred in 1869, when Captain (now Sir Charles) Wilson went out on the Sinai Survey Expedition, accompanied by Captain Palmer, R.E., the Rev. F. W. Holland, and E. H. Palmer. The business of the "pundit" was to investigate the traditions, dialects, and antiquities of the Sinai peninsula. He developed during this journey a wonderful power of quickly apprehending and acquiring dialectic differences, and took his first lessons in the art of managing the difficult tribes of Sinai. Soon after his return in 1870 he made arrangements with the Committee of the Palestine Exploration Fund for a journey of exploration in the very little known Negeb or South Country and the desert of the Tih. This he accomplished at very small expense in company with the late Mr. C. F. Tyrwhitt Drake, who was assisted by a grant made by the University from the Worts Travelling Bachelors' Fund. His report of the results of the journey was published in the *Quarterly Statement* of the Palestine Exploration Fund, and has been republished in the book of special papers belonging to the "Memoirs of the Survey of Western Palestine." He also wrote a popular account of the same expedition called "The Desert of the Exodus." In the same year, by the resignation of Mr. Theodore Preston, who had long been non-resident, the Lord Almoner's Professorship of Arabic became vacant, and was given by the late Dean of Windsor to Palmer. This preferment, although only worth 40*l.* a year, enabled him to keep his Fellowship and to marry. The stipend of the Professorship was also increased by the University to 300*l.* a year on condition of his giving lectures in Persian and Hindustani. In the year 1874 he was called to the Bar, and although he never seriously considered the law as a profession, it was one of his chief pleasures to go on circuit, to conduct an occasional case, and to study the curious phases of life presented by a county assize. I believe, however, that he showed considerable power in the exercise of advocacy.

Between 1871 and the present year the real work of his life was done. It is wonderful to consider how vast a quantity of work he got through

during these ten years. It must be remembered, too, that the work was accomplished in the face of ill health—he was always suffering from asthma—and domestic affliction caused by the long illness and death of his first wife. A revision of Henry Martyn's translation of the New Testament into Persian ; an Arabic grammar ; an Arabic manual ; a Persian dictionary ; a report on the Bedawin of Sinai ; a translation into Arabic of Moor's "Paradise and the Peri" ; an edition, with an English translation, of the Arab poet Beha ed Din Zohair ; a translation of the Koran ; a history of Jerusalem ; a life of the Caliph Haroun al Raschid ; the "Song of the Reed," chiefly from Arabic and Persian sources ; a volume of verses in Romany, written with Miss Janet Tuckey and Mr. Charles Leland ; and a translation of the Swedish poet Runeberg (with Mr. Erikr Magnusson), make up together a goodly show of work in a short ten years. But besides these books he wrote occasionally for the *British Quarterly Review*—one of his papers on "The Secret Sects of Syria" was a very remarkable article—for the literary journals, for the *Saturday Review*, and for several of the monthly magazines. He translated and transliterated the long lists of names procured by Captain Conder during the survey of Western Palestine, and he was appointed joint editor, with me, of the memoirs of that great work. He was also engaged in preparing a set of manuals and grammars for Messrs. Trübner & Co. at the time when he consented to go out to the desert for the Government. It is impossible for any one to be actively connected with the Palestine Exploration Society without being forced to take an interest in the manifold topographical questions which agitate the minds of the members. Palmer, who took strongly from the beginning a view antagonistic to that of Mr. James Fergusson, contributed for his share of the controversy an account, from the Arab historians' descriptions of the building, of the much disputed Dome. Concerning his linguistic attainments, it is difficult to enumerate the languages which he had acquired, because he was continually learning new ones. Arabic, Persian, Hindustani, Urdu, are some of the Eastern tongues with which he was familiar. He knew Turkish, but not, I think, so well. As regards European languages, he knew French, German, Spanish, Greek, Italian, and Swedish, with its cousins of Denmark, Norway, and Iceland. He knew some Polish and some Russian, but I do not know how far he could be called a master of these languages. He could talk Romany as well as any gipsy on the road. It is a curious fact that he once came across Romany-speaking gipsies in Moab. A striking illustration of his facility and mastery of language occurs to me. We were going together to visit the Foreign Sailors' Home at Limehouse. In the road, just before we arrived at that institution, he espied a friend in charge of a cart filled with baskets—one Stanley or Smith—with whom he exchanged five minutes of question and greeting in Romany. On the steps of the Home were two men basking in the sun : one of these was a Lascar from Calcutta, the other a burly negro who hailed from the Soudan, and talked some kind of Arabic. In the conversation which followed, both men

having a budget of grievances to unfold, it was evidently little or no effort for Palmer to pass from Arabic to Hindustani and back again, turning from one to the other while both talked at once. It is not uncommon to find scholars who have so far mastered languages as to be able to read the literature of many tongues with ease and pleasure, but it is rare indeed to find a man who can speak with equal ease in all or any of the languages he has studied. Palmer was by no means a mere man of books ; there was nothing in his ordinary speech, except his extraordinary flow of anecdote, to show that he was a scholar at all. He was a man of small stature, quiet manners, and gentle voice. Yet he was a man who at once impressed every one with whom he came in contact. Perhaps it would not be too much to assert that he had no business or private relations with any man who did not straightway become his friend. Therefore, because he was concerned in many things, he was a man of many friends. It is beyond any power of words to express the loss which those who enjoyed his intimate friendship have suffered by his untimely death.

Another thing : this rare linguist, this extraordinary scholar, possessed to a remarkable degree that power which enables men to become conjurers, thought-readers, so-called spiritualistic mediums. The science of legerdemain had no mysteries for him ; he could cheat the senses so that you saw, and steadfastly maintained that you saw, the thing which was not. No doubt the possession of this extraordinary sympathetic faculty stood him in the greatest stead in dealing with the Arabs of the desert. No one else, in fact, could do with these wild people what he could do. He had many methods : he laughed with them or at them ; he refused to be moved by their threats ; he ordered them ; he assumed that they were going to do what he wanted ; if necessary he cursed them.

Again, he was an excellent actor : he could "render" a scene with the greatest fidelity and skill, he could multiply himself and personate alone a play with many characters, he could represent to the very life any man he chose to study. And latterly he developed a new power, that of drawing caricature portraits. There exists at his house a portfolio of water-colour drawings in which the features of many friends are depicted with the most good-natured and truthful satire. Another remarkable thing was that although he read very little English literature, and professed to be entirely ignorant of English poetry, he wrote verse with great ease and fluency, both translations and original verse. I hope that when his papers are examined there will be found the materials for giving a glimpse of this side of a many-sided man.

These few words are weak and feeble indeed. Had the man been of lesser power, of lower nature, I could doubtless have spoken more firmly. One wonders whether he ever knew or suspected in the least how great and rare a man he was—how much his friends respected him, and with what bitter hearts they would mourn his loss.

WALTER BESANT.

## OBSERVATIONS ON THE CLIMATE OF JERUSALEM.

By THOMAS CHAPLIN, M.D.

## RAIN.

THE following report on the rainfall at Jerusalem embodies the results of a series of observations made during twenty-two years, namely, from 1860-1 to 1881-2.

The instruments employed for measuring the rain have been of two kinds : (1) the old-fashioned float-gauge of Newman, and (2) Glaisher's gauge, as supplied by Negretti & Zambra. The chief disadvantage of the former instrument is that, in consequence of the float displacing by its weight a portion of the water in the cylinder, the reading is usually too low, or no indication at all may be given, when the quantity of rain has been very small. As a collector it has often proved more efficient than the other kind, when heavy rain and hail have fallen accompanied with much wind. The observations have been made with constant regularity at 9 o'clock a.m., except for a short period during the month of March, 1863, and the number of days during which rain fell in that month is not known.

During the first six seasons Newman's gauge was employed ; during the remaining seasons Glaisher's. During four seasons the two gauges were placed side by side, and the readings of each carefully noted. The float-gauge showed 88.829 inches during this period, and Glaisher's gauge showed 93.250 inches, and these comparative measurements have been made use of for correcting the readings of the first six seasons, during which the float-gauge alone was employed.<sup>1</sup>

The position of the instruments was in a garden within the city, about 2,500 feet above the level of the Mediterranean, open on all sides, the houses which bound it on the south and west being too far removed to influence the fall of rain into the pluviometers.

Palestine being one of those countries in which a long period of dry weather is regularly followed by one of rainy weather, it will be more practically useful to arrange this report according to seasons than according to years, notwithstanding that each season includes the later months of one year and the early months of the next.

1. The mean duration of each rainy season has been 188 days—the longest being 221 days, the shortest 126 days. The mean duration of each dry season has been 177 days, the longest being 211 days, the shortest 134 days. [Table I.]

2. In ten seasons the rains began between the 4th and 28th of October (inclusive) ; in twelve seasons between the 1st and 28th of November

<sup>1</sup> For this reason my report of the first five seasons, which was printed in the "Times" of August 16th, 1865, differs slightly from the present.

(inclusive). [Table I.] In four years there has been a slight fall of rain in the month of September, and it is remarkable that on each of these occasions the rainfall of the ensuing season was considerably below the average. [Table II.]

3. In eight years the last rain of the seasons fell between the 2nd and 29th of April (inclusive), and in fourteen years between the 1st and 27th of May (inclusive). A very little rain has sometimes fallen in June. [Table I.]

4. The mean number of days on which rain has fallen in each season has been 52—the highest being 71, the lowest 37. [Table II.]

5. The mean quantity of rain measured in each season has been 22·760 inches—the greatest quantity being 42·932 inches, the smallest 12·269 inches. [Table II.]

6. The mean quantity which has fallen in the several months included in the rainy season, and the mean number of rainy days in each month, are as follows:—

Months.		No. of rainy days.	Inches of rain.
October	....	1·50	·514
November	....	5·31	1·664
December	....	9·04	4·718
January	....	10·28	5·479
February	....	10·43	5·207
March	....	8·51	3·531
April	....	5·45	1·448
May	....	1·59	·199
<hr/>			
		52·11	22·760

7. During the rainy seasons rain falls on one or more days, and is followed by one or more days of fine weather, and these fine days of the winter and early spring months are some of the most enjoyable that the climate of Palestine affords. The mean number of *rainy periods* in each season has been 23—the highest being 30, the lowest 16. These rainy periods seldom cover more than seven or eight days, and in some entire seasons it has not rained more than five or six consecutive days. Once it rained and snowed for fourteen days (in January, 1861), and once for thirteen days (in February, 1882). Table III has been drawn up to show the number of days in each *rainy period*, and the interval of fine weather which has followed.

8. The rainy season divides itself into three periods. First, that of the early rain, called by the peasants *el wasm el bedry*, “the early sign,” which moistens the land and fits it for the reception of the seed, and is consequently the signal for the commencement of ploughing. Second, the copious winter rain, which saturates the earth, fills the cisterns and pools, and replenishes the springs. Third, the latter or spring rain, which causes the ears of corn to enlarge, enables the wheat and barley to support the dry heat of the early summer, and without which the harvest fails.

Between the commencement of the early rain and the setting in of the heavy winter rain a considerable period elapses, and again between the termination of the winter rain and the close of the rainy season by the fall of the last of the spring rains, but these periods are usually broken by the occurrence of rainy days, so that it is often not easy to decide to which period a particular fall of rain should be assigned. Thus in the year 1881 the first rains of autumn fell on November 5th, and were separated by a period of thirty-six days from the heavy winter rains which began on December 18th, but this period was broken by the occurrence of three non-consecutive days on which rain fell; and at the end of the same season the heavy rains terminated on the 15th of April, and the period of thirty-six days which elapsed before the last spring rain fell was broken by the occurrence of four rainy days. The times of the commencement and termination of the heavy winter rains are as uncertain as those of the autumn and spring rains. As a rule, it may be considered that the autumn or early rains extend from the commencement of the rainy season in October or November until the middle of December, the winter rains from the middle of December until the middle or end of March, and the latter or spring rains from the middle of March until the termination of the rainy season in April or May.

9. Although rain may fall when the wind is blowing from any point of the compass, the copious rains are almost invariably brought from a western quarter. Of the 506 falls of rain included in this report, 8 were from the north, 14 from the north-east, 12 from the east, 10 from the south-east, 19 from the south, 238 from the south-west, 156 from the west, and 49 from the north-west. On 149 occasions an easterly wind immediately preceded the change which ushered in the rain. The direction of the wind frequently alters during the fall; if it passes to the north, the rain ceases; a change from any quarter towards the south-west usually indicates a continuance of rain. [Table IV.]

10. On 248 occasions the fall of rain commenced after a gradual fall of the mercury in the barometer during two or more days, on 144 occasions after a fall during one day, and on 114 after a slight rise. Not unfrequently, after a gradual diminution of the atmospheric pressure, rain begins to fall as the glass begins to rise. During the fall of rain, the mercury rose on 281 occasions, fell on 69, first fell and then rose on 132, and on 24 occasions remained steady until after the rain had ceased. It is during the severe and stormy rainy periods of the winter season that the glass commonly falls and afterwards rises. [Table V, A and B.]

11. It is popularly supposed that the atmosphere becomes warmer as the rain falls. This, however, is not usually the case. The sensation of increased warmth is caused by diminution in the amount of evaporation from the surface of the body when the air becomes saturated with moisture. On 369 occasions the temperature of the air became lower as the rain fell, on 90 it rose slightly, and on 47 remained stationary, or nearly so, until the rain ceased. [Table VI.]

12. In fourteen seasons snow has fallen, and eight seasons have passed

without snow. The last few days of December, the months of January and February, and the earlier part of March, are the periods for snow, but in 1870 there was a heavy fall (1·8 inch) on the 7th and 8th of April, a very remarkable and extraordinary occurrence. For the most part the snow is in small quantity, and soon melts, but very heavy snow-storms sometimes occur, and the snow may then remain unmelted in the hollows on the hill-sides for two or three weeks. The deepest snowfall was on the 28th and 29th of December, 1879, when it measured 17 inches where there was no drift. In February, 1874, it was  $8\frac{1}{4}$  inches deep, and on the 14th of March, 1880, 5 inches. The drifts are sometimes exceedingly deep. [Table VII.]

13. It is remarkable that of twelve earthquakes registered during these twenty-two years, no less than nine have been experienced in the rainy season, namely, one in October, one in December, one in January, two in February, three in March, and one in April; eight were associated with storm, and four occurred during snow. In Table VIII the readings of the barometer before and after the earthquakes are noted, and the direction of the wind at the time of their occurrence. In nearly every instance they have been preceded or followed by an easterly wind.

14. The overflow of Beer Ayûb, in the Kidron Valley, is regarded by the inhabitants of Jerusalem as an indication that there will be no serious deficiency of water for drinking during the ensuing summer. Careful observations show that the overflow of this well does not depend so much on the quantity of rain which has fallen since the commencement of the season as upon a large quantity falling in a short time. Table IX shows the circumstances under which it has overflowed on every occasion during the period included in this report. On each of the four occasions on which rain has fallen in September there has been no overflow of Beer Ayûb in the following rainy season.

15. A very deficient rainfall is invariably followed by a deficient harvest, but a rainfall much above the average does not necessarily result in a proportionately large harvest. The conditions most favourable to a good yield of wheat and barley are a liberal supply of winter rain, falling on many days, with no prolonged intervals of fine and dry weather, and a copious fall of latter or spring rain. Taking the price of wheat as an indication of the quality of the harvest, we find that after the four years of lowest rainfall, the mean of which was 14 inches, the mean cost of a measure of wheat was 31 piastres; after the three years of highest rainfall the mean of which was 37 inches, the mean cost of a measure of wheat was 23 piastres; and after the four years of nearly average rainfall, the mean of which was 23 inches, the mean cost of a measure of wheat was only 18 piastres. When the previous part of the season has been favourable, the harvest may be said to depend entirely upon a sufficiency of the late rains, but a favourable latter rain cannot save the harvest if the corn has previously been extensively shrivelled by a long continuance of easterly winds, nor will the most promising harvest prove satisfactory unless a sufficiency of rain fall at the end of March or during the month of April.

In Table X, the total rainfall, the number of rainy days, and the amount of latter rain, in each season, are placed for comparison in the same column with the price of wheat during the ensuing summer. In using this table it should be remembered that there has been a gradual rise of prices in Palestine during the last twenty years, and that other circumstances besides the rainfall of the season sometimes influence the price of corn.<sup>1</sup>

16. In the Hebrew scriptures, whilst מטר is used as a generic term for rain, גשם appears to signify the pouring winter rain, מורה the early rain, and מלך the latter rain. In the well-known passage in Joel (ii, 23), the three are mentioned together, and the connection indicates the necessity of all three for the production of a fruitful harvest : “ He will cause to come down upon you the heavy winter rain גשם, the early rain מורה, and the latter rain מלך . . . and the floors shall be full of wheat ; ” and again in Hosea (vi, 3) : “ He shall come to us like the heavy winter rain גשם, like the latter rain מלך, and the former rain יורה upon the earth ”—all that are required to fertilise it, neither being sufficient alone. The beautiful description of spring in the Song of Solomon (ii, 11, *et seq.*) is untrue to nature as rendered in our English translation. The flowers appear on the earth, and the time of the singing of birds comes at least six weeks before the rain is over and gone. It is when the heavy winter rain גשם ceases, and the warm spring weather commences, that the flowers appear, the birds begin to sing, and the voice of the turtle is heard, and it is during this pleasant period that the latter rains fall at intervals. (Cf. Gen. vii, 12, and Ezra x, 13.)

## II. ATMOSPHERIC PRESSURE, TEMPERATURE, WINDS, CLOUDS, DEW.

### *Atmospheric Pressure.*

1. Jerusalem is 2,500 feet above the level of the Mediterranean Sea, and the mean height of the barometer at 9 a.m. during twenty-one years, corrected for index error and reduced to 32° Fahr., has been 27·398. The highest reading during the period was 27·816, on the 31st December, 1879 ; the lowest, 26·972, on the 22nd April, 1863, and the 3rd February, 1865, so that the extreme range has been 0·844. The mean annual range has been 0·626. During the eight months in which rain falls, namely, October to May inclusive, the mean height of the mercury has been 27·428 ; and during the four summer months, when rain very seldom falls, namely, June to September inclusive, 27·331. The months of lowest pressure are July and August, when the mean reading has been 27·290. [Tables XI, XII, XIII.]

<sup>1</sup> War, for instance, and other political disturbances, which cause a larger number of young men than usual to be taken for soldiers. After a very bad harvest, the peasants are too poor to sow largely the ensuing season, and consequently the price of wheat never comes down to the average in one year, however good the crop may be.

2. The mean monthly range has been 0·305. The highest and the lowest readings have occurred in the winter or spring seasons. During the five months from December to April inclusive, the mean monthly range has been 0·423, and during the seven months from May to November inclusive, 0·222. [Table XIII.]

*Temperature.*

1. To carry on a continuous series of meteorological observations in Jerusalem is extremely difficult, owing to the delays and uncertainties involved in replacing broken or defective instruments, and although great and constant care has been taken to make regular observations, it has several times happened that for a long period one or more of the thermometers has been wanting. The following report on temperature is founded chiefly on observations made through eight successive years, namely, 1864 to 1871 inclusive, with only one short break which does not materially influence the result.<sup>1</sup>

2. The mean temperature during this period was 62·8° Fahr. The coldest month is February, when the mean temperature was 47·9°. It rises month by month until August, when it was 76·1°, and then sinks again month by month until the following February. [Table XIV.]

3. Although the mean temperature is highest in August, the hottest days do not always occur in that month. The highest temperature during these eight years was on the 24th June, 1869, when it reached 103·5°. In May also and September the temperature sometimes rises to 100° or higher. The highest temperature observed during twenty-one years was on the 28th and 30th August, 1881, when it remained for some hours at 112°. The mean temperature during seven days, terminating on August 31st in that year, was 94·4°. [Table XIV.]

4. Although the mean temperature is lowest in February, the minimum of the year does not always occur in that month. The lowest temperature observed during twenty-one years was on the 20th January, 1864, when the minimum thermometer registered 25° Fahr., or 7° of frost. In February and October also, and once in April, a minimum of 32° and 30° has been noted. In Jerusalem frost generally occurs on five or six nights in the course of the winter, but it is rare for ice to remain throughout the day, except in cold situations sheltered from the sun. It will be remembered that the thermometrical observations are made in a garden within the city. It is no doubt often much colder on the hills outside. [Table XIV.]

5. The mean monthly range has been 39·9°. It is greatest in the spring, early summer, and autumn, less in July and August, and least in December, January, and February. From its maximum of 49·8°, in May, it sank to 37·3° and 38° in July and August, rose again to 44·8° in

<sup>1</sup> My warm thanks are due to Mr. Samuel Wiseman and Mr. Joseph el Jemel, of the London Society's Mission to the Jews, for assistance in carrying on the observations.

October, again sank to 31 and 31·6 in December and January, and again rose through February, March, and April to its maximum in May. Thus there are in the course of the year two maxima and two minima of monthly range. [Table XIV.]

6. The mean daily range has been 19·5°. It is greatest in summer from May to October, having during these six months been 23·3°. During the six months from November to April it was 15·7°. The greatest mean daily range was in September, 24·1°; the least in January, 13°. [Table XIV.]

7. The climate of Jerusalem presents at different times the extremes of dryness and moisture. Not unfrequently during the rainy months the dry and wet bulb of the hygrometer stand at the same point, whilst in "sirocco" weather the difference is very great. The mean difference throughout the year at 9 a.m. has been 9·6°; during the six months from November to April, inclusive, 5·8°; and during the six months from May to October, inclusive, 13·1°. But 9 a.m. is not the driest hour of the day. When "sirocco" is prevalent the dry and wet bulb at noon, or a little later, sometimes differ 25 or even 30 or more degrees. On one extraordinary occasion, in August, 1881, there was for a few hours in the middle of the day a difference of 40°, the dry bulb marking 112°, and the wet bulb 72°, and on two or three days the difference was 35° at 9 a.m. [Table XIV.]

#### Winds.

1. In no country are the health and comfort of the inhabitants and the fruitfulness of the soil more immediately and obviously influenced by the character and direction of the wind than in Palestine. The north wind is *cold*, the south *warm*, the east *dry*, and the west *moist*; and the winds from the intermediate quarters partake of these characteristics in a degree corresponding to their nearness to the cardinal points; the north-east wind is cold and dry, the north-west cold and moist, the south-east hot and dry, and so on.

2. North and north-westerly winds prevail most in the summer months, when they are cool and refreshing, moderately dry, and accompanied by no clouds, or only a few cirri or cumuli. The northerly winds of winter are cold and sharp, and dry or moist according as they come from north-east or north-west. When from the latter quarter they are frequently accompanied by masses of cumulus, which have a very beautiful appearance against the deep blue of the sky. The coolness and sharpness of the north winds, even in the summer season, are much dreaded, especially by the inhabitants of the maritime plain, where they produce sore throats, fevers, and dysenteries. These winds are called *sumâwy*, i.e., heavenly, probably from the clear blue sky which accompanies them. North, north-west, and north-east winds have occurred on 182 days in the year at 9 a.m. [Table XV.]

Whenever during summer there is little wind for several days the heat becomes very great, the mercury in the barometer rises, and the air becomes almost as dry and destitute of ozone as in a *sirocco*, even though what little wind there is blows from a northerly quarter. Ordinarily

this condition is obviated by the springing up of a strong westerly breeze in the afternoon. This breeze is felt as early as 9 or 10 a.m. at Jaffa and other places along the coast, but does not usually reach Jerusalem before 2 or 3 p.m., sometimes not until much later. After sunset it subsides, but soon rises again, and continuing through a great part of the night refreshes the parched land with the abundance of moisture with which it is laden. From a sanitary point of view the value of this evening breeze can hardly be overrated. When it does not blow, or blows very gently, bringing no clouds, and not rising again after the lull which follows sunset, the nights are hot and depressing, there is no dew, and the mornings are wanting in freshness.

One of the most important differences between the climate of the hill district and that of the low western coast of Palestine is in connection with this daily wind from the sea. Although felt nearly every day on the coast, it does not always reach the hills, and hence in very hot weather, when Jerusalem (for instance) is almost insupportable from a severe easterly wind, Jaffa may be comparatively cool and pleasant. In traversing the plain also this wind loses much of its moisture, and it is only after it has been blowing with considerable force for some hours that its refreshing qualities are fully experienced. The struggle for the mastery which sometimes takes place when a current of hot, dry, heavy air from the east meets this moist sea breeze is extremely interesting to witness. Neither being strong enough to overcome the other, the lighter west wind occasionally rises above the eastern current, and clouds may be seen floating towards the east, whilst the lower stratum of air is moving westward, and this may continue some time before a fusion takes place and equilibrium is established (see below). Sometimes a violent disturbance occurs, whirlwinds are produced, clouds and pillars of dust arise, and an hour or more may elapse before the west wind prevails, for it is always the west wind that obtains the victory after these severe contests. At other times the change to a westerly wind is so silent as to pass unnoticed, except in consequence of the change in the quality of the air. The lassitude occasioned by extreme heat suddenly begins to pass away, the spirits revive, exertion again becomes a pleasure, and a glance at the vane shows that a westerly wind is already established. It is very curious, if one happens to be looking out, to see the weathercock suddenly turn round without apparent cause, and almost immediately to feel the refreshing influence of cooler and moister air. The wind has blown direct from the west fifty-five times in a year at 9 a.m. Though most frequent in July and August the west wind is more equally distributed over the several months than any other wind. [Table XV.]

3. Easterly winds are common in autumn, winter, spring, and the month of May. In summer they are rare; on a mean of sixteen years it has blown from an eastern quarter on 101 days in the year at 9 a.m.; from June to September, inclusive, on three days in each month; from October to May, inclusive, on eleven days in each month. [Table XV.] But it is not uncommon during the hot weather for an easterly wind to

blow for three or four hours in the middle of the day, and in the evening to give way to the westerly wind which continues until 10 or 11 o'clock next morning, so that the register made at 9 a.m. does not show all the easterly winds that have occurred.

In winter the east wind is accompanied by a clear blue sky, with perhaps a few cirri. It is dry, stimulating, and, if not too strong, very agreeable. But in the warmer months it is unpleasant and depressing from its great heat and dryness, and the haze and dust which occasionally accompany it. It is when the wind blows from the south-east that it acquires the peculiarities which Europeans usually signify by the term *sirocco*. At such time the sky may be cloudless, or with some cirrus and stratus, the temperature is high,  $84^{\circ}$  to  $90^{\circ}$ , or higher, the air destitute of ozone, and extremely dry, the difference between the wet and dry bulb being often as much as  $24^{\circ}$  or even  $28^{\circ}$  or  $30^{\circ}$ . There may be calm, but sometimes the wind amounts to 1 or 1.5, and veers between east, south-east, and south. The more the wind tends to the south, the more dull and overcast is the sky, and the more disagreeable to the feelings the state of the atmosphere; the more it tends to the east, the clearer is the sky and the stronger and fresher the breeze. The worst kind of *sirocco* dries the mucous membrane of the air passages, producing a kind of inflammation resulting in catarrh and sore throat; it induces great lassitude, incapacitating for mental as well as bodily exertion, in those who walk or work in it; headache, with a sense of constriction as if a cord were tied round the temples, oppression of the chest, burning of the palms of the hands and soles of the feet, accelerated pulse, thirst, and sometimes actual fever. It dries and cracks furniture, loosening the joints of tables and chairs, curls the covers of books and pictures hung in frames, parches vegetation, sometimes withering whole fields of young corn. Its force is not usually great, but sometimes severe storms of wind and fine dust are experienced, the hot air burning like a blast from an oven, and the sand cutting the face of the traveller who has the misfortune to encounter it. This kind of air has a peculiar smell, not unlike that of the neighbourhood of a burning brick-kiln. Sometimes the most remarkable whirlwinds are produced, especially in the western plain near the hills, by the meeting of a strong east or south-east wind with a wind from the west or north. Clouds of sand fly about in all directions, now taking the traveller in front, now behind, and now on the side, and the gusts of wind are so violent as to blow weak persons from their horses, and to overturn baggage animals. The cold *sirocco* of winter often blows with much force, and when it comes from a few degrees north of east, it is so cold and piercing as sometimes to kill those who are exposed to it without sufficient clothing, instances of which occurred in 1867.

A great number of observations have been made with a view of determining the amount of ozone in the atmosphere in different states of the weather, and these repeated experiments have shown that none is to be detected during the prevalence of the *sirocco* wind. It was thought the extreme dryness of the air might prevent the chemical reaction, but the

result was the same when the paper was kept moistened. The west, north-west, and especially the south-west currents of air are those most richly charged with ozone.

The following is a note of a summer *sirocco* written at the time of its occurrence:—"At 9 a.m. on August 24th, 1877, a brisk wind was blowing direct from the east, there was considerable haze and dust, and high up towards the north-east some cirro-cumulus. In the course of the morning cumulus increased, and became mingled with the haze. At sunset it was 3. The dry bulb at 9 a.m. was 96°, wet bulb 63°; at 11 a.m., dry bulb 102°, wet bulb 66°; at noon, dry bulb 103·3°, wet bulb 66·5°. About 5 p.m. a rainbow was observed, and a few drops of rain were said to have fallen a little west of the city. During this remarkable day a very dry, and consequently heavy, stratum of heated air was driven with considerable force from the east, and was met (probably in the western plain) by a moist current from the sea; they did not immediately mingle, but the light moist air passed onwards towards the east over the heavy stratum of hot dry air, the velocity of both being impeded. The wind below continued east all day, sinking gradually from a force of 0·5 to 0·2, and eventually to 0·0, and in the evening a light soft breeze sprang up from west-south-west which passed round to west soon after sunset. The next morning the two strata of air had commingled, the sky was clear, excepting some haze in the horizon, temperature very high, 97·5° at 9 a.m., rising to 107° at noon, and the difference between the wet and dry bulb had gone down to 34°. At noon the wind, which until then had been north-east, passed by way of north to west." The termination of a late autumn *sirocco* is different. "November 4th, 1868. After *sirocco* had prevailed for more than thirty days, the wind suddenly changed on October 30th, by way of south to west, a breeze sprang up bringing cumuli and loose masses of nimbus; much dew was deposited during the night, and there were a few drops of rain. Two gusty cloudy days followed, the atmosphere becoming more and more hazy from fine dust, and on the evening of November 2nd a heavy, long-continued shower of rain fell, preceded by thunder. The next day there was more rain, and by the morning of the 5th upwards of an inch had been measured. During the days preceding the rain the barometer and thermometer both fell—the former gradually, the latter more suddenly. At 9 a.m. on October 30th the temperature was 88°, at 9 a.m. on the 31st 66°, and on the 3rd November it had fallen to 53°, a difference of 35° in four days."

It is an old and common saying that a *sirocco* always lasts three days, but like many other popular sayings this is only partially true. A *sirocco* may last three days, or it may last twenty or even thirty days. Thus in 1868 there was *sirocco* almost every day from 28th September until the weather began to break up for rain on October 30th. During the continuance of *sirocco* there is frequently a partial change in consequence of the sea-breeze of the afternoon reaching the hills, and the vane is often found pointing to north or north-west at 9 a.m. It occasionally happens that the air has all the qualities of a bad *sirocco* when the wind is blowing from a

northerly or westerly quarter. No doubt the *sirocco* storms are often of the nature of cyclones, and these instances are probably sometimes due to the returning current of a wind which originally proceeded from some point between south and east. But the peculiarities of this wind, its heat, its dryness, and its deficiency in ozone, are probably of telluric origin; and it appears that whenever a very high temperature prevails for some days without wind, the quality of the air in contact with the surface of the earth becomes modified, and a wind springing up from any quarter may then have for a time the properties of the true *sirocco*—the *simeoom*, or poisonous wind, which usually comes from the interior of Arabia.

4. The mean force of the wind at 9 a.m. has been 0·46 on a mean of ten years. It is greatest in February, March, and April, in which the mean has been 0·65, and least in August, September, and October, when the mean has been 0·30. During the winter months the force of the wind sometimes amounts to 3·5 or 4, on a scale of 0—6, but it is very seldom that damage of a serious nature is done to trees or buildings. The mean number of days on which there was calm at 9 a.m. has been 108 in a year, the greatest number being in the five months from September to January inclusive, when the mean in each month was eleven days. As in all mountain districts, absolute calm is rare for any length of time, and a very delicate instrument might perhaps have detected some movement of the air on many of the days entered as calm. [Table XVI.]

### *Clouds.*

1. As in other warm countries, clouds are in Palestine a very important element of the climate. Their presence is beneficial in three ways—they are at once a cause and a sign of moisture in the air; by intercepting the rays of the sun they produce shade which moderates the heat; and by the evaporation of the water of which they are composed the temperature of the atmosphere is lowered. The mean annual amount of cloud at 9 a.m. on a mean of sixteen years has been 2·8. The amount is smallest in July and August (0·6 and 0·9); it rises gradually through the autumn to its maximum in the winter months, and then falls again gradually to its minimum in July. On the same mean, 140 days in the year have been cloudless at 9 a.m., the maximum number being in July (21·5), and the minimum in February and March (5·1 and 5·5). [Table XVII.]

### *Dew.*

1. During the fine weather of the winter months dew falls in Palestine from the same causes and under the same circumstances as in Europe, the moisture contained in the atmosphere being deposited when the night is favourable to the radiation of heat from the surface of the earth. But in the summer months, when the whole country is arid, and there is no water to evaporate, the copious dews are brought entirely by the westerly winds from the sea. If no westerly breeze, or a very light one, springs up

towards evening, there is no dew. The heavy dews of summer which modify the climate so remarkably differ from ordinary dew in the manner of their deposition, *being in great part precipitated in the air in the form of mist before being deposited on the earth.*<sup>1</sup> On summer evenings a few clouds are commonly to be seen in the western horizon soon after sunset. Later in the evening they increase in number, become lower and looser, and sweep past at no great elevation, and often with considerable velocity. After midnight, or earlier, they become still more abundant and still lower, brushing the tops of the hills as they pass, and depositing much of their moisture upon them. Although dew may fall, even in summer, in the usual way on clear nights, the surest sign of a copious deposition is the appearance of clouds with a westerly wind after sunset. Frequently there is a visible moisture in the atmosphere, which yet does not amount to mist or cloud, but produces only a haziness in the horizon, which is indicative of a damp night. Dew is most copious in spring, and in September and October, except during *sirocco* weather, when there is none. It may be noted that clouds and a westerly wind at sunset and afterwards are not always indications of a very damp night. The dew deposited as a result of this condition early in the evening may, if the wind should fall or change to east, entirely evaporate before morning. It is the continuance of the westerly wind through the night that brings abundance of dew. During the prevalence of *sirocco*, and especially when *sirocco* is just commencing or terminating, the sky is sometimes obscured at night by masses of cirrocumulus and some stratus intermixed, and when this is the case there is usually no dew. But should a wind spring up from the west, and bring cumulus and mist from the sea, a deposit of dew takes place.

After a very dewy night the sky at daybreak is obscured and often houses, trees, &c., also by a thick mist, the ground, plants, stones, and especially tents, being wet as if rain had fallen. As the sun rises the mist begins to clear, and large masses of loose flocculent clouds are formed, between which the bright blue sky is here and there visible. These masses of cloud become smaller and denser as the heat increases, forming beautiful cumuli, which in their turn disappear and give place to the dull blue sky usual in summer. The time at which these morning clouds entirely disappear depends on their amount and the heat of the weather. Frequently the sky is quite clear by 9 o'clock, and it is rare for more than one or two masses of cumulus to remain later than 10 or 11 o'clock, but during the day, when the wind is not easterly, a little light cloud may sometimes be seen to form in the sky, and after growing for a time gradually but quickly disappear, to be soon followed by another. This "one cloud" often attracts the attention of the traveller, and becomes an object of

<sup>1</sup> "Aristotle supposed dew to be a species of rain, formed in the lower atmosphere in consequence of the moisture which had been carried up during the day by evaporation being condensed by the cold of the night into minute drops."—"Penny Cyclop." Art. DEW.

interest to him as he goes on his way, and not improbably it suggested to St. James that beautiful simile of human life, "What is your life? It is even a vapour (*ἀτμὸς*) that appeareth for a little time and then vanisheth away."

#### NOTE.

The unhealthy period of the year, the period in which the climatic diseases of the country, such as ophthalmia, fevers, and dysentery, are most prevalent, extends from May to October inclusive. Six things strongly characterise this period. 1. Almost entire absence of rain; 2. Low atmospheric pressure with small range; 3. High temperature with great daily range; 4. Great dryness of the atmosphere; 5. A very small amount of cloud; and 6. Except at the beginning and end of the period, a minimum of easterly winds.

TABLE I.—Showing date of commencement and termination of rains, and the duration of the rainy and dry seasons.

Seasons.	Date of		Duration of	
	Commencement.	Termination.	Rainy Season.	Following Dry Season.
1860-1	November 12th	May 25th	195	172
1861-2	November 14th	April 29th	167	185
1862-3	November 1st	April 28th	179	167
1863-4	October 13th	April 26th	197	197
1864-5	November 10th	May 9th	181	175
1865-6	November 1st	April 21st	172	165
1866-7	October 4th	May 12th	221	181
1867-8	November 10th	May 27th	200	158
1868-9	November 2nd	May 7th	187	191
1869-70	November 15th	April 22nd	159	173
1870-1	October 13th	May 2nd	202	173
1871-2	October 23rd	May 24th	215	134
1872-3	October 6th	May 3rd	210	173
1873-4	October 24th	April 5th	164	211
1874-5	November 3rd	May 1st	180	195
1875-6	November 13th	May 16th	186	145
1876-7	October 9th	April 28th	202	174
1877-8	October 20th	May 7th	200	204
1878-9	November 28th	April 2nd	126	208
1879-80	October 28th	May 2nd	188	167
1880-1	October 17th	May 21st	217	167
1881-2	November 5th	May 23rd	200	..
		Means ..	188·5	176·9

TABLE II.—Showing the number of days on which rain fell, and the amount of rain in each month during 22 rainy seasons, from 1860–1 to 1881–2.

Seasons.	1860–1		1861–2		1862–3		1863–4	
Months.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.
September ..	..	..	..	..	..	..	..	..
October ..	..	..	..	..	..	..	7	1·900
November ..	2	·105	3	·184	9	2·957	1	·190
December ..	7	2·191	13	7·763	7	2·587	12	7·125
January ..	14	9·663	14	12·409	10	9·109	8	6·890
February ..	7	6·495	7	2·270	7	2·402	5	1·503
March ..	5	2·402	3	·633	?	3·695	4	1·082
April ..	1	·316	4	1·003	7	2·112	6	1·648
May ..	4	·475	..	..	..	..	..	..
Totals ..	40	21·647	44	24·262		22·862	43	20·338
Seasons.	1864–5		1865–6		1866–7		1867–8	
Month.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.
September ..	2	·091	..	..	..	..	..	..
October ..	..	..	..	..	5	1·745	..	..
November ..	4	2·645	11	1·560	8	1·835	4	2·240
December ..	7	1·648	11	5·450	13	2·970	10	6·975
January ..	7	4·541	14	5·055	11	9·245	9	3·565
February ..	8	5·084	9	3·175	12	6·067	18	10·925
March ..	5	·422	9	3·460	8	2·135	7	3·285
April ..	3	·765	4	·290	3	2·010	13	1·928
May ..	3	·370	..	..	5	·730	1	·140
Totals ..	37	15·475	58	18·990	65	26·737	62	29·058
Seasons.	1868–9		1869–70		1870–1		1871–2	
Months.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.
September ..	..	..	1	·270	..	..	..	..
October ..	..	..	..	..	4	2·290	2	1·580
November ..	7	1·186	6	1·470	1	·010	1	·100
December ..	13	8·017	5	1·165	4	1·450	13	6·489
January ..	15	7·715	9	1·235	9	2·943	6	3·105
February ..	12	3·265	1	·690	11	4·415	17	5·249
March ..	4	1·945	9	3·990	16	6·747	7	1·430
April ..	8	2·363	13	3·719	3	1·100	4	·420
May ..	2	·395	..	..	1	·190	3	·108
Totals ..	61	24·916	43	12·269	49	19·145	53	18·181

Seasons.	1872-3		1873-4		1874-5		1875-6	
Months.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.
September ..	..	..	..	..	..	..	1	.030
October ..	4	.310	1	.010	..	..	..	..
November ..	7	3.390	7	4.410	6	2.510	6	1.120
December ..	7	6.235	13	9.300	6	1.435	9	3.190
January ..	4	.130	15	8.430	14	6.790	7	3.420
February ..	10	6.032	12	7.215	12	4.085	10	4.140
March ..	11	1.935	20	10.017	14	10.520	7	2.270
April ..	2	.890	3	.130	4	1.040	8	1.965
May ..	1	.010	..	..	1	.230	4	350
Totals ..	46	18.942	71	39.512	57	26.610	51	16.455

Seasons.	1876-7		1877-8		1878-9		1879-80	
Months.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.
September ..	..	..	..	..	2	.790	..	..
October ..	1	.080	5	2.180	..	..	3	.815
November ..	7	1.690	11	5.015	1	.025	5	.685
December ..	3	.490	13	7.345	4	3.000	6	4.235
January ..	9	1.595	14	13.390	6	.980	15	5.995
February ..	13	8.750	13	11.490	6	2.265	12	4.035
March ..	5	.885	7	2.350	17	7.520	7	5.635
April ..	3	.210	2	.510	3	1.520	6	2.065
May ..	..	..	3	.652	..	..	1	.100
Totals ..	41	13.700	68	42.932	37	15.310	55	23.565

Seasons.	1880-1		1881-2		Mean of 22 seasons.	
Months.	Days.	Inches.	Days.	Inches.	Days.	Inches.
September ..	..	..	..	..	..	..
October ..	1	.400	..	..	1.50	.514
November ..	5	.860	5	2.430	5.31	1.664
December ..	15	12.995	8	1.720	9.04	4.718
January ..	3	1.275	11	3.075	10.28	5.479
February ..	12	4.430	16	12.590	10.43	5.207
March ..	10	4.355	4	.970	8.51	3.531
April ..	8	2.205	12	3.650	5.45	1.448
May ..	2	.065	4	.570	1.59	.199
Totals ..	56	26.585	60	25.005	52.11*	22.760

\* 21 seasons.

TABLE III. Showing the number of days in each rainy period, and the interval of fine weather following.

—	1860-1		1861-2		1862-3		1863-4	
	Days of		Days of		Days of		Days of	
	rain.	interval.	rain.	interval.	rain.	interval.	rain.	interval.
	1	6	1	7	1	15	1	2
	1	11	1	7	4	1	2	9
	1	3	1	7	2	2	3	1
	2	9	1	1	1	3	1	9
	1	2	6	1	1	4	1	22
	1	1	1	3	1	4	1	7
	1	1	1	2	1	2	7	9
	1	22	1	4	1	2	2	1
	3	3	2	1	1	11	2	6
	14	4	5	4	3	5	4	4
	2	7	5	7	1	10	3	7
	1	3	4	5	1	5	1	12
	1	16	1	2	6	2	1	3
	1	12	1	1	4	2	1	2
	1	2	1	10	1	5	1	2
	3	22	2	5	1	1	2	13
	1	19	3	12	1	8	3	21
	1	1	2	17	(?) 2	?	1	16
	2	11	1	20	1	3	1	1
	1	..	2	7	1	9	1	4
	..	..	2	..	3	1	1	3
	..	..	..	..	2	..	3	..
	..	..	..	..	..	..	..	..
	..	..	..	..	..	..	..	..
Rainy periods..	20	..	21	..	22	..	22	..
Rainy days ..	40	..	44	..	..	..	43	..
Dry days ..	155	..	123	..	..	..	154	..
Duration } of rainy season } days	195	..	167	..	179	..	197	..

TABLE III—*continued.*

	1864-5		1865-6		1866-7		1867-8	
	Days of		Days of		Days of		Days of	
	rain.	interval.	rain.	interval.	rain.	interval.	rain.	interval.
	1	11	3	10	1	15	1	1
	1	2	2	4	3	1	3	19
	2	9	4	1	1	7	2	7
	2	3	2	12	3	7	2	1
	3	1	3	11	2	4	3	9
	1	8	8	6	2	5	3	13
	1	14	7	2	1	9	4	1
	1	2	2	3	4	4	2	3
	3	11	2	1	3	8	2	6
	3	6	1	2	3	2	1	1
	2	9	1	4	1	1	3	3
	1	5	2	6	3	4	1	3
	3	1	2	1	6	13	6	2
	1	2	1	6	3	3	8	7
	1	2	2	6	2	3	2	1
	1	3	5	6	2	3	3	13
	1	1	1	2	1	1	2	5
	1	8	1	3	2	8	5	3
	1	8	4	9	6	10	3	8
	1	16	1	4	2	2	2	1
	1	1	2	15	2	8	3	31
	2	18	2	..	3	2	1	..
	2	3	..	..	1	8	..	..
	1	..	..	..	3	28	..	..
	..	..	..	..	5	..	..	..
Rainy periods ..	24	..	22	..	25	..	22	..
Rainy days ..	37	..	58	..	65	..	62	..
Dry days ..	144	..	114	..	156	..	138	..
Duration of rainy season	181	..	172	..	221	..	200	..

TABLE III—*continued.*

	1868-9		1869-70		1870-1		1871-2	
	Days of		Days of		Days of		Days of	
	rain.	interval.	rain.	interval.	rain.	interval.	rain.	interval.
	2	1	1	3	1	7	2	28
	2	9	4	6	1	5	1	7
	1	3	1	1	2	2	2	9
	1	4	1	7	1	42	5	1
	1	6	2	9	1	3	1	1
	4	3	2	16	3	16	2	1
	1	2	2	3	3	1	2	5
	4	1	1	8	1	6	1	5
	2	6	1	1	3	10	2	10
	2	12	2	1	4	3	2	4
	2	3	1	1	1	9	2	7
	4	1	1	2	1	1	4	1
	4	2	1	8	4	2	5	3
	1	1	1	22	3	3	3	4
	1	1	3	11	11	1	5	6
	3	1	2	2	3	9	1	14
	1	4	4	8	2	8	4	8
	2	1	2	2	1	9	4	7
	5	4	5	4	2	16	1	5
	1	7	2	1	1	..	1	17
	4	13	4	..	..	..	1	7
	1	5	..	..	..	..	1	12
	2	13	..	..	..	..	1	..
	2	3	..	..	..	..	..	..
	3	3	..	..	..	..	..	..
	2	10	..	..	..	..	..	..
	1	2	..	..	..	..	..	..
	1	5	..	..	..	..	..	..
	1	..	..	..	..	..	..	..
Rainy periods..	29	..	21	..	20	..	23	..
Rainy days ..	61	..	43	..	49	..	53	..
Dry days ..	126	..	116	..	153	..	162	..
Duration of rainy season } days	187	..	159	..	202	..	215	..

TABLE III—*continued.*

	1872-3		1873-4		1874-5		1875-6	
	Days of		Days of		Days of		Days of	
	rain.	interval.	rain.	interval.	rain.	interval.	rain.	interval.
	1	14	1	19	2	5	3	5
	3	14	1	5	1	6	1	2
	2	1	3	2	1	1	1	4
	5	26	3	15	1	7	1	5
	1	12	6	1	1	2	1	4
	6	14	3	4	1	7	1	2
	1	7	4	2	2	2	1	4
	2	6	4	5	1	13	1	1
	1	2	3	2	2	6	1	1
	1	6	2	6	1	1	1	2
	2	6	2	1	2	1	2	1
	1	1	3	1	5	8	1	3
	3	1	2	1	2	3	1	4
	2	3	1	2	3	2	3	3
	1	7	1	2	3	5	2	7
	3	4	1	1	3	2	1	4
	3	1	1	1	1	2	1	1
	3	6	3	2	4	3	1	1
	1	3	1	4	3	4	1	2
	2	16	1	3	1	1	3	2
	1	14	5	2	2	1	2	5
	1	..	5	5	6	6	1	14
	..	..	4	1	1	7	2	3
	..	..	1	1	4	4	4	3
	..	..	7	4	2	4	2	22
	..	..	2	1	2	21	1	7
	..	..	1	..	1	..	3	..
Rainy periods..	22	..	27	..	27	..	27	..
Rainy days ..	46	..	71	..	57	..	51	..
Dry days ..	164	..	93	..	123	..	135	..
Duration } of rainy season	210	..	164	..	180	..	186	..

TABLE III—*continued.*

— —	1876-7		1877-8		1878-9		1879-80	
	Days of		Days of		Days of		Days of	
	rain.	interval.	rain.	interval.	rain.	interval.	rain.	interval.
	1	28	1	2	1	1	5	4
	1	6	3	1	1	22	1	11
	4	8	1	7	1	1	1	7
	2	20	1	3	2	20	1	15
	1	1	1	1	1	4	1	6
	1	8	3	10	3	3	1	4
	1	1	3	1	2	4	1	2
	2	8	3	8	1	6	3	3
	3	6	2	1	2	3	8	2
	1	5	3	8	2	3	1	3
	3	3	5	1	1	11	2	1
	1	3	2	1	3	1	1	2
	7	4	3	4	9	3	3	15
	4	8	2	7	3	3	5	2
	1	2	4	2	1	4	4	1
	2	10	3	1	4	..	2	3
	1	1	1	3	..	..	1	11
	1	13	2	4	..	..	7	21
	1	2	4	2	..	..	1.	6
	1	20	2	2	..	..	3	9
	1	4	4	2	..	..	2	5
	1	..	2	1	..	..	1	..
	..	..	1	4	..	..	..	..
	..	..	2	4	..	..	..	..
	..	..	1	14	..	..	..	..
	..	..	2	4	..	..	..	..
	..	..	2	18	..	..	..	..
	..	..	2	12	..	..	..	..
	..	..	2	4	..	..	..	..
	..	..	1	..	..	..	..	..
Rainy periods..	22	..	30	..	16	..	22	..
Rainy days ..	41	..	68	..	37	..	55	..
Dry days ..	161	..	132	..	89	..	133	..
Duration of rainy season } days	202	..	200	..	126	..	188	..

TABLE III—*continued.*

—	1880-1		1881-2	
	Days of		Days of	
	rain.	interval.	rain.	interval.
	1	31	3	12
	1	5	1	6
	1	3	1	6
	5	3	1	12
	5	2	5	6
	1	9	1	1
	1	1	1	3
	3	1	1	9
	3	13	10	8
	2	10	13	11
	1	9	3	17
	2	3	2	5
	4	3	1	3
	2	3	1	3
	4	6	6	6
	4	5	4	7
	1	4	2	6
	3	4	1	1
	2	17	1	18
	8	21	2	..
	1	8	..	..
	1	..	..	..
Rainy periods..	22	..	20	..
Rainy days ..	56	..	60	..
Dry days ..	161	..	140	..
Duration } of rainy } days season	217	..	200	..

TABLE IV.—Showing connection of rain with direction of wind.

Seasons.	Number of rainy periods.	Direction of wind during rainfall								Easterly wind preceding.
		N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	
1860-1	20	..	1	..	..	..	2	16	1	7
1861-2	21	..	1	1	..	1	7	11	..	6
1862-3	22	1	..	2	..	2	7	10	..	8
1863-4	22	..	1	2	..	..	10	9	..	7
1864-5	24	1	1	..	1	2	10	5	4	7
1865-6	22	..	2	..	1	1	11	2	5	12
1866-7	25	..	1	..	..	3	18	3	..	10
1867-8	22	1	..	..	..	..	14	7	..	5
1868-9	29	..	..	1	1	1	17	5	4	5
1869-70	21	..	1	..	..	..	10	6	4	8
1870-1	20	..	..	..	..	..	15	3	2	6
1871-2	23	..	1	1	..	..	13	7	1	5
1872-3	22	..	..	1	..	1	7	8	5	4
1873-4	27	1	1	..	1	1	9	12	2	5
1874-5	27	3	..	1	..	1	11	9	2	9
1875-6	27	..	..	1	2	3	13	5	3	7
1876-7	22	..	..	..	1	..	10	11	..	5
1877-8	30	..	2	1	..	1	13	9	4	9
1878-9	16	1	1	..	..	1	7	1	5	3
1879-80	22	..	..	..	1	1	13	3	4	7
1880-1	22	..	1	1	1	..	11	7	1	8
1881-2	20	..	..	..	1	..	10	7	2	6
Totals ..	506	8	14	12	10	19	238	156	49	149

TABLE V.—Showing connection of rainfall with barometric changes.

Seasons.	Number of rainy periods.	A			B			
		Rain began after			During the rain the mercury			
		Gradual fall of mercury.	Fall of one day only.	Slight rise	Rose.	Fell.	First fell then rose.	Remained steady.
1860-1	20	11	2	7	9	4	3	4
1861-2	21	9	8	4	6	8	6	1
1862-3	22	5	11	6	12	4	4	2
1863-4	22	14	2	6	12	4	5	1
1864-5	24	11	5	8	13	5	4	2
1865-6	22	4	14	4	8	3	8	3
1866-7	25	8	12	5	12	1	12	..
1867-8	22	9	10	3	6	6	9	1
1868-9	29	13	8	8	14	4	9	2
1869-70	21	12	6	3	15	2	4	..
1870-1	20	11	7	2	14	2	4	..
1871-2	23	15	3	5	18	1	4	..
1872-3	22	10	3	9	17	1	3	1
1873-4	27	13	7	7	7	6	13	1
1874-5	27	12	11	4	17	3	6	1
1875-6	27	14	8	5	17	2	5	3
1876-7	22	15	4	3	15	2	4	1
1877-8	30	10	10	10	16	3	10	1
1878-9	16	8	4	4	13	1	2	..
1879-80	22	13	4	5	13	3	6	..
1880-1	22	15	4	3	16	1	5	..
1881-2	20	16	1	3	11	3	6	..
Totals.	506	248	144	114	281	69	132	24

TABLE VI.—Showing connection of rainfall with temperature.

Seasons.	Number of rainy periods.	With the fall of rain the temperature		
		Fell.	Rose.	Remained unchanged.
1860-1	20	13	6	1
1861-2	21	16	4	1
1862-3	22	11	9	2
1863-4	22	13	8	1
1864-5	24	18	1	5
1865-6	22	15	3	4
1866-7	25	20	2	3
1867-8	22	14	4	4
1868-9	29	21	5	3
1869-70	21	16	2	3
1870-1	20	14	4	2
1871-2	23	16	5	2
1872-3	22	16	4	2
1873-4	27	21	4	2
1874-5	27	23	1	3
1875-6	27	21	5	1
1876-7	22	18	4	..
1877-8	30	22	6	2
1878-9	16	12	1	3
1879-80	22	17	5	..
1880-1	22	17	4	1
1881-2	20	15	3	2
Totals .. ..	506	369	90	47

TABLE VII.—Snow.

Seasons.	
1860-1	January 5th and 11th ; February 1st and 2nd, deep.
1861-2	None.
1862-3	January 24th, February 22nd, 1 inch.
1863-4	None.
1864-5	None.
1865-6	None.
1866-7	None.
1867-8	February 14th, 16th, 21st, 22nd, 26th and 27th.
1868-9	None.
1869-70	April 7th and 8th, 1·8 inch.
1870-1	February 19th.
1871-2	None.
1872-3	February 18th.
1873-4	December 26th, 3 ins.; January 10th, 23rd, 31st; February 6th and 7th, 8½ ins.; February 28th; March 1st, 3rd, 6th, 17th, and 18th, 4½ ins.
1874-5	January 10th and 29th; March 9th and 27th, 8½ inches.
1875-6	February 4th.
1876-7	February 8th and 17th.
1877-8	January 28th ; February 15th, 16th, and 17th, 5 inches.
1878-9	None.
1879-80	December 28th and 29th, 17 ins. ; March 11th and 14th, 5 ins.
1880-1	March 20th.
1881-2	January 22nd ; February 3rd, 4 inches ; February 10th, 1½ inch.

TABLE VIII.—Earthquakes.

Year.	Date.	Hour of day.	Barometer at		Wind.	Weather.
			previous 9 a.m.	next 9 a.m.		
1863	April 22nd	10.45 p.m.	26·972	27·308	W.	Changing with severe sandstorm from east to west.
1864	September 24th	8.15 p.m.	27·522	27·484	W.	Clear.
	March 24th	2.30 a.m.	27·472	27·466	E.	Changed from east to west in afternoon.
1868	January 24th	3.50 p.m.	27·572	27·522	W.	Changed to east next day.
	February 19th	midnight	27·262	27·252	W.	Rain and snow followed.
	October 7th	7.30 p.m.	27·527	27·532	W.	Storm, thunder and rain, changing from sirocco.
1870	June 24th	7 p.m.	27·472	27·442	W.	Clear and still.
1873	June 29th	2.30 a.m.	27·472	27·522	W.	Clear and still.
1874	March 3rd	1.40 a.m.	27·472	27·350	S.W.	Snowstorm.
1877	February 15th	7.15 a.m.	27·472	27·390	S.W.	Snow followed.
	March 14th	6.15 a.m.	27·352	27·286	N.W.	Changed from east on day previous.
1879	December 31st	9 a.m.	27·512	27·816	N.	Snow.

Table IX.—The overflow of Beer Ayûb.

Seasons.	Date of overflow.	Inches of rains which fell before.	No. of consecutive days rain immediately before.	Inches of rain which fell on these days.	Rainfall of the season Inches.
1860-1	Jan. 24th, 1861	8·2	4	5·7	21·647
1861-2	Jan. 2nd, 1862	10·6	3	3·5	24·262
1862-3	Jan. 26th, 1863	10·9	5	5·6	22·862
1863-4	Jan. 9th, 1864	12·2	3	3·6	20·338
1864-5	Did not flow		..	..	15·475
1865-6	{ Jan. 9th, 1866 March 1st, 1866	9·8 15·2	4 4	3·2 2·1	{ 18·990
1866-7	{ Jan. 9th, 1867 Jan. 26th, 1867 Feb. 26th, 1867	9·9	7	4·6	26·737
1867-8	Feb. 3rd, 1868	14·3	2	1·6	29·058
1868-9	Dec. 13th, 1868	8·3	2	3·6	24·916
1869-70	Did not flow		..	..	12·269
1870-1	March 9th, 1871	14·5	7	3·4	19·158
1871-2	Dec. 16th, 1871	7·6	3	5·9	18·481
1872-3	Dec. 26th, 1872	9·7	3	5·6	18·942
1873-4	Dec. 27th, 1873	10·4	1	2·4	39·512
1874-5	Feb. 5th, 1875	12·7	2	1·9	26·610
1875-6	Did not flow		..	..	16·445
1876-7	Feb. 10th, 1877	10·7	6	6·7	13·700
1877-8	Dec. 31st, 1877	14·5	1	2·1	42·932
1878-9	Did not flow		..	..	15·310
1879-80	{ Jan. 7th, 1880 March 13th, 1880	7·4	5	1·7	23·565
1880-1	Doubtful		..	..	26·585
1881-2	Feb. 5th, 1882	12·7	6	5·5	25·005

TABLE X.—To show connection of price of wheat with rainfall.

Seasons ..	..	..	..	1860-1	1861-2	1862-3	1863-4
No. of rainy days	..	..		40	44	..	43
Total rainfall	..	.. inches		21·6	24·2	22·8	20·3
Latter rain	..	.. inches		2·975	1·475	4·112	1·675
Price of wheat ..		piastres		17	16	12	18

TABLE X—*continued.*

Seasons .. .. .. ..	1864-5	1865-6	1866-7	1867-8
No. of rainy days .. ..	37	58	65	62
Total rainfall .. .. inches	15·4	18·9	26·7	29·0
Latter rain .. .. inches	1·135	2·436	4·649	3·913
Price of wheat .. piastres	23	21	18	22
Seasons .. .. .. ..	1868-9	1869-70	1870-1	1871-2
No. of rainy days .. ..	61	43	49	53
Total rainfall .. .. inches	24·9	12·2	19·1	18·4
Latter rain .. .. inches	3·417	5·499	3·760	1·628
Price of wheat .. piastres	18	28	25	18
Seasons .. .. .. ..	1872-3	1873-4	1874-5	1875-6
No. of rainy days .. ..	46	71	57	51
Total rainfall .. .. inches	18·9	39·5	26·6	16·4
Latter rain .. .. inches	1·555	6·352	6·830	2·315
Price of wheat .. piastres	24	24	18	17
Seasons .. .. .. ..	1876-7	1877-8	1878-9	1879-80
No. of rainy days .. ..	41	68	37	55
Total rainfall .. .. inches	13·7	42·9	15·3	23·5
Latter rain .. .. inches	·935	2·952	3·025	4·755
Price of wheat .. piastres	34	25	39	29

NOTE.—A measure of wheat weighs about 48 lbs. English. A piastre is about twopence.

## OBSERVATIONS ON THE CLIMATE OF JERUSALEM.

TABLE XI.—Showing the mean and the maximum and minimum height of barometer and monthly range, during each month of 21 years. Obs. at 9 a.m.

Years.	January.			February.			March.			April.			
	Mean reduced to 32	Highest.	Lowest.	Mean reduced to 32	Highest.	Lowest.	Mean reduced to 32	Highest.	Lowest.	Mean reduced to 32	Highest.	Lowest.	
1861	27.405	27.630	27.127	27.503	27.566	27.782	27.416	27.166	43.4	27.420	27.592	27.200	
1862	27.418	27.622	27.232	27.390	27.413	27.516	27.452	27.618	28.8	27.420	27.598	27.150	
1863	27.480	27.672	27.125	27.517	27.488	27.606	27.322	27.84		27.341	27.552	26.972	
1864	27.472	27.722	27.212	27.480	27.430	27.658	27.112	5.46	27.411	27.656	27.350	27.522	
1865	27.431	27.660	27.312	27.318	27.332	27.572	26.972	6.00	27.393	27.600	27.372	22.8	
1866	27.435	27.740	27.200	27.514	27.437	27.738	27.284	4.54	27.400	27.656	27.312	34.1	
1867	27.466	27.692	27.272	27.420	27.507	27.722	27.392	3.80	27.317	27.654	27.172	38.2	
1868	27.456	27.722	27.272	27.450	27.383	27.772	27.252	5.20	27.363	27.600	27.222	37.5	
1869	27.447	27.772	27.202	27.572	27.464	27.710	27.232	1.75	27.324	27.536	27.202	33.4	
1870	27.464	27.742	27.350	27.492	27.456	27.670	27.200	4.70	27.399	27.514	27.100	40.1	
1871	27.451	27.712	27.340	27.422	27.454	27.772	27.322	4.50	27.416	27.582	27.246	33.6	
1872	27.450	27.710	27.342	27.368	27.448	27.700	27.272	4.25	27.379	27.672	27.222	35.5	
1873	27.512	27.770	27.284	27.486	27.126	27.742	27.272	4.70	27.315	27.552	27.112	40.4	
1874	27.436	27.772	27.072	27.700	27.126	27.745	27.160	5.86	27.371	27.658	27.110	40.2	
1875	27.468	27.746	27.092	27.614	27.368	27.661	27.172	4.92	27.335	27.686	27.082	31.8	
1876	27.519	27.772	27.322	27.426	27.426	27.660	27.322	3.85	27.353	27.549	27.122	41.8	
1877	27.448	27.712	27.122	27.590	27.139	27.692	27.234	4.55	27.458	27.730	27.286	44.4	
1878	27.469	27.704	27.308	27.396	27.442	27.710	27.212	5.25	27.420	27.672	27.272	34.5	
1879	27.487	27.691	27.372	27.322	27.480	27.672	27.415	2.54	27.338	27.616	27.154	46.2	
1880	27.497	27.754	27.345	27.406	27.650	27.622	27.128	1.28	27.378	27.634	27.156	47.8	
1881	27.505	27.746	27.322	27.421	27.329	27.578	27.017	1.51	27.419	27.695	27.170	52.8	
										27.369	27.656	27.222	43.4
Mean height reduced to 32			27.465	..	27.437	..	..	..	..	27.352	..	27.351	
Mean of all highest			27.715	..	27.681	..	..	..	..	27.618	..	27.604	
Mean of all lowest			27.240	..	27.211	..	..	..	..	27.209	..	27.241	
Mean monthly range ..			475	..	453	..	..	..	..	408	..	362	

## OBSERVATIONS ON THE CLIMATE OF JERUSALEM.

TABLE XI—continued.

Years.	May.			June.			July.			August.		
	Mean reduced to 32°	Highest.	Lowest.	Mean reduced to 32°	Highest.	Lowest.	Mean reduced to 32°	Highest.	Lowest.	Mean reduced to 32°	Highest.	Lowest.
1861	27.421	27.538	27.262	27.397	27.538	27.247	29.1	27.333	27.230	21.2	27.422	27.275
1862	27.774	27.566	27.410	27.400	27.506	27.302	20.4	27.379	27.314	14.8	27.432	27.312
1863	27.470	27.572	27.362	27.405	27.522	27.320	20.2	27.360	27.422	11.4	27.522	27.272
1864	27.4.8	27.612	27.342	27.0	27.328	27.556	23.1	27.279	27.454	0.0	27.492	27.320
1865	27.353	27.512	27.382	16.0	27.317	27.542	27.267	27.172	27.296	17.6	27.492	27.300
1866	27.374	27.592	27.262	27.345	27.622	27.352	27.267	27.276	27.522	25.2	27.472	27.322
1867	27.345	27.395	27.592	27.620	27.392	27.522	27.362	27.282	27.472	27.272	27.516	27.327
1868	27.378	27.411	27.642	27.364	27.387	27.622	27.384	27.306	27.494	27.330	16.4	27.548
1869	27.411	27.720	27.418	27.302	27.331	27.512	27.350	27.192	27.482	3.02	27.542	27.302
1870	27.379	27.772	27.382	27.310	27.319	27.534	27.372	16.2	27.256	27.522	27.222	27.508
1871	27.378	27.610	27.364	27.346	27.376	27.630	27.382	27.248	27.281	14	27.472	27.270
1872	27.384	27.612	27.362	27.350	27.373	27.570	27.392	27.178	27.262	27.302	22.0	27.518
1873	27.417	27.612	27.334	27.28	27.334	27.562	27.354	27.272	27.212	27.464	27.308	15.6
1874	27.401	27.566	27.306	27.260	27.319	27.562	27.296	27.276	27.510	27.308	27.321	27.570
1875	27.383	27.660	27.412	27.258	27.386	27.572	27.422	15.0	27.282	27.450	27.366	27.552
1876	27.417	27.622	27.422	27.200	27.397	27.622	27.422	20.0	27.328	27.530	27.400	27.592
1877	27.352	27.572	27.252	27.320	27.326	27.542	27.322	22.0	27.188	27.490	27.272	27.482
1878	27.404	27.644	27.422	27.301	27.514	27.272	27.242	27.268	27.462	302	27.585	27.472
1879	27.370	27.598	27.284	27.314	27.331	27.582	27.330	25.2	27.284	27.506	22.4	27.317
1880	27.371	27.562	27.382	180	27.382	27.628	27.382	246	27.296	27.552	296	27.281
1881	27.359	27.567	27.342	227	27.359	27.611	27.342	227	27.385	301	182	27.285
												..
Mean height reduced to 32°	27.397	..	27.359	..	27.359	..	27.359	..	27.359	..	..	27.295
Mean of all highest	27.611	..	27.567	..	27.567	..	27.567	..	27.567	..	..	27.505
Mean of all lowest	27.355	..	27.342	..	27.342	..	27.342	..	27.342	..	..	27.320
Mean monthly range	260	..	227	..	227	..	227	..	227	..	..	185

## OBSERVATIONS ON THE CLIMATE OF JERUSALEM.

TABLE XI—*continued.*

Years.	September.			October.			November.			December.		
	Mean reduced to 32°	Highest. Lowest. Range	Mean reduced to 32°	Mean reduced to 32°	Highest. Lowest. Range	Mean reduced to 32°						
1861	27·128	27·522	27·332	190	27·511	27·592	27·422	170	27·519	27·672	27·394	27·216
1862	27·445	27·502	27·416	186	27·499	27·572	27·402	170	27·412	27·570	27·398	27·272
1863	27·471	27·558	27·372	180	27·530	27·622	27·352	270	27·502	27·710	27·413	27·200
1864	27·354	27·602	27·386	216	27·454	27·670	27·322	118	27·428	27·658	27·312	27·372
1865	27·388	27·572	27·396	176	27·437	27·622	27·432	190	27·427	27·648	27·322	27·392
1866	27·351	27·586	27·372	214	27·447	27·658	27·472	186	27·476	27·742	27·362	27·482
1867	27·354	27·586	27·372	135	27·457	27·692	27·477	215	27·459	27·706	27·356	27·482
1868	27·394	27·567	27·432	201	27·505	27·722	27·504	218	27·499	27·746	27·420	27·364
1869	27·368	27·566	27·362	270	27·447	27·622	27·342	280	27·543	27·800	27·456	27·362
1870	27·401	27·612	27·342	270	27·447	27·622	27·342	280	27·543	27·800	27·456	27·362
1871	27·373	27·542	27·372	170	27·403	27·622	27·412	210	27·461	27·672	27·452	27·318
1872	27·350	27·510	27·374	166	27·411	27·656	27·452	204	27·464	27·720	27·404	27·318
1873	27·378	27·600	27·422	178	27·456	27·632	27·410	192	27·432	27·658	27·334	27·467
1874	27·385	27·668	27·430	238	27·457	27·650	27·472	178	27·458	27·662	27·322	27·490
1875	27·409	27·602	27·404	198	27·452	27·668	27·372	206	27·428	27·652	27·322	27·442
1876	27·383	27·610	27·392	218	27·427	27·618	27·412	176	27·449	27·672	27·372	27·467
1877	27·420	27·642	27·436	206	27·450	27·716	27·406	310	27·452	27·658	27·372	27·486
1878	27·322	27·542	27·312	246	27·425	27·622	27·412	183	27·434	27·539	27·512	27·523
1879	27·385	27·580	27·410	170	27·480	27·690	27·466	221	27·493	27·672	27·452	27·574
1880	27·398	27·594	27·412	182	27·488	27·702	27·478	224	27·493	27·706	27·340	27·590
1881	27·374	27·584	27·364	220	27·456	27·650	27·484	166	27·441	27·662	27·322	27·428
Mean height reduced to 32°			27·388	..	27·462	..	..	27·470	..	27·470	..	27·465
Mean of all highest			27·579	..	27·619	..	..	27·685	..	27·685	..	27·709
Mean of all lowest			27·386	..	27·488	..	..	27·384	..	27·384	..	27·291
Mean monthly range			194	..	212	..	..	206	..	206	..	417

TABLE XII.—Showing the mean height, maximum and minimum height, and annual range of barometer during 21 years. Obs. at 9 a.m.

Years.	Mean height reduced to 32°.	Highest in the year.	Lowest in the year.	Yearly range.
1861	27·443	27·782	27·127	·655
1862	27·438	27·782	27·150	·632
1863	27·439	27·672	26·972	·700
1864	27·367	27·722	27·110	·612
1865	27·392	27·660	26·972	·688
1866	27·379	27·740	27·200	·540
1867	27·380	27·742	27·172	·570
1868	27·386	27·772	27·182	·590
1869	27·410	27·772	27·202	·570
1870	27·405	27·800	27·110	·690
1871	27·388	27·772	27·246	·526
1872	27·389	27·732	27·150	·582
1873	27·393	27·770	27·112	·658
1874	27·394	27·772	27·072	·700
1875	27·388	27·710	27·082	·628
1876	27·401	27·772	27·030	·742
1877	27·413	27·730	27·122	·608
1878	27·385	27·740	27·212	·528
1879	27·400	27·816	27·154	·662
1880	27·396	27·754	27·156	·598
1881	27·389	27·770	27·097	·673
21 years ..	27·398	27·816	26·972	·844

Mean annual range, ·626

TABLE XIII.—Showing mean height of barometer, reduced to 32°, at 9 a.m. during the several months of the year, and the monthly range. Mean of 21 years.

Months.		Barometer reduced to 32°.	Monthly range.
January ..	..	27·465	·475
February ..	..	27·437	·453
March ..	..	27·382	·408
April ..	..	27·351	·362
May ..	..	27·397	·260
June ..	..	27·359	·227
July ..	..	27·285	·182
August ..	..	27·295	·185
September ..	..	27·388	·194
October ..	..	27·462	·212
November ..	..	27·470	·296
December ..	..	27·465	·417
Year ..	..	27·396	·305

TABLE XIV.—Showing the maximum and minimum temperature, mean temperature, mean monthly and daily range, &c., during the several months of the year. Mean of 8 years.

Months.	Highest in the period.	Lowest in the period.	Mean monthly range.	Mean daily range.	Mean Temper- ature.	Hygrometer.			Difference.
						Dry bulb mean 9 a.m.	Wet bulb mean 9 a.m.		
January ..	74·8	25·0	31·6	13·0	48·4	48·4	44·5		3·9
February ..	79·0	30·0	32·9	13·4	47·9	48·5	44·3		4·2
March ..	88·0	33·9	42·0	16·9	55·7	57·8	50·5		7·3
April ..	86·0	30·6	44·6	18·7	58·4	61·1	52·3		8·8
May ..	103·0	43·0	49·8	23·1	69·3	73·4	59·1		14·3
June ..	103·5	47·8	44·0	22·5	72·8	77·6	63·0		14·6
July ..	98·2	49·0	37·3	23·1	73·8	78·4	65·4		13·0
August ..	101·0	61·3	38·0	23·6	76·1	79·5	65·7		13·8
September ..	100·0	42·0	41·4	24·1	71·5	74·9	64·0		10·9
October ..	96·5	32·0	44·8	23·6	68·6	73·0	60·8		12·2
November ..	89·2	34·5	41·5	18·7	59·9	61·6	54·2		6·4
December ..	73·6	36·8	31·0	13·9	51·4	52·0	47·3		4·7
			39·9	19·5	62·8	65·5	55·9		9·6

TABLE XV.—Showing the number of days on which the wind blew from certain directions during the several months of the year at 9 a.m. Mean of sixteen years.

Months.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
January ..	1·25	5·00	5·25	2·00	1·62	6·00	4·68	5·18
February ..	1·12	2·75	4·18	2·37	1·43	5·93	4·43	6·00
March ..	1·25	2·25	3·87	4·31	1·25	6·06	5·81	6·18
April ..	2·43	1·50	3·75	4·81	1·37	4·68	4·62	6·81
May ..	4·18	3·18	3·12	4·12	0·68	2·00	3·68	10·00
June ..	4·25	1·87	1·50	1·62	0·50	3·00	4·18	13·06
July ..	3·00	0·81	0·31	0·37	0·31	1·87	6·31	17·93
August ..	3·81	1·37	0·37	0·50	0·56	2·62	6·18	15·56
Septem <sup>b</sup> er ..	6·62	1·87	1·18	0·68	0·75	1·18	4·68	13·00
October ..	4·62	3·75	4·62	2·93	0·75	2·62	2·43	9·25
November ..	2·50	5·06	6·56	1·81	0·68	4·18	3·93	5·25
December ..	1·25	3·31	5·50	3·12	1·93	6·31	4·06	5·50
Year ..	36·28	32·72	40·21	28·64	11·83	46·45	54·99	113·72

TABLE XVI.—Showing the mean force of the wind at 9 a.m. and the mean number of calm days in each month. Mean of 10 years.

Months.		Mean force of wind at 9 a.m. 0—6	Mean number of calm days at 9 a.m.
January ..	..	0·47	10·7
February ..	..	0·67	7·6
March ..	..	0·65	5·9
April ..	..	0·63	6·5
May ..	..	0·49	6·8
June ..	..	0·41	8·3
July ..	..	0·40	7·3
August ..	..	0·32	9·1
September ..	..	0·33	10·3
October ..	..	0·27	12·3
November ..	..	0·41	11·5
December ..	..	0·50	11·7
Year ..	..	0·46	108·0

TABLE XVII.—Showing the mean amount of cloud and the mean number of cloudless days at 9 a.m. in the several months of the year. Mean of 16 years.

Months.		Mean amount of cloud. 0—10	Mean number of cloudless days.
January ..	..	4·4	6·8
February ..	..	4·8	5·1
March ..	..	5·0	5·5
April ..	..	3·7	8·9
May ..	..	2·4	11·8
June ..	..	1·1	18·5
July ..	..	0·6	21·5
August ..	..	0·9	18·0
September ..	..	1·2	17·5
October ..	..	2·3	12·2
November ..	..	3·5	8·0
December ..	..	4·6	6·7
Year ..	..	2·8	140·0

## LIFE, HABITS, AND CUSTOMS OF THE FELLAHIN OF PALESTINE.

By the Rev. F. A. KLEIN.

(*From the "Zeitschrift" of the German Palestine Exploration Society.*)

Before giving a slight sketch of the Fellahin method of agriculture, it will be as well to describe the present state of the Land Tenure. It is of three kinds :—

### I. *Ard miri*,<sup>1</sup> or taxed Crown land.

In this class are included nearly all the large and fruitful plains like those of Jaffa, Ramleh, and Esdraelon. These lands are leased by the government to various individuals, or sometimes to a whole village. The lessee pays a tenth of the produce of the soil for his right of cultivation. *Miri* land, therefore, cannot be sold by the lessee, nor has he the power to transfer it ; he merely possesses the right of cultivation for a given time, and this only holds good during the lifetime of the lessor. In the event of his death, the contract he has made becomes null and void, even though its term be not expired.

The *muzāra'a* descends to his children. Should he not have any, it goes to his brothers or sisters or their descendants, and failing them, to his father or uncles and cousins on the paternal side. In the case of a man possessing none of the above-mentioned relations, the *muzāra'a* reverts to the State. A few years ago a large piece of land, in the plain of Jezreel, fell in in this manner, and was sold by the government to the firm of Sursuk in Beirut.

II. *Ard wakūf*, or glebe-land, is land which has been left to the Mosques and Holy Places, or for the maintenance of schools and religious institutions. Rich tracts of such land are owned by the Mosque of Omar, the Neby Daud sepulchre, and the Mosque in Hebron. These lands cannot be sold, but only leased. The lessees are responsible, not to the government, but to the *mutaweli* or bailiff, who retains a share of the tithes for himself. By this means many poor Effendi families obtain an income. Great abuses have crept into the management of the *wakūf*, and there is only too much foundation for the complaint that the Effendis "eat up" and misappropriate the revenues.

III. *Ard mulk*, or freehold, is chiefly composed of small pieces of ground in the neighbourhood of the villages, such as fig and olive plantations, gardens, and vineyards. These are generally enclosed by mud walls or cactus hedges. The proprietor is, of course, free to sell them if he thinks fit, or, as it often happens, to exchange<sup>2</sup> them for other *mulk* lands. Hitherto the title-deeds of these lands have been drawn up by a writer in

<sup>1</sup> Shortened form of *ard emiri*—land of the Emir.

<sup>2</sup> *Badal*—exchange; *baya*—sale.

the village, and provided they had the necessary names of witnesses and the proper seals, the owner's right was not disputed. Lately, however, the Turkish government has been trying to get even the *mulk* under its control.

In some parts of Palestine there is a good deal of *ard bawr*, or fallow land. This is due partly to the scantiness of the population, and partly to the prevailing poverty and indolence. There is not much in the fertile valleys, but in the hilly districts some of the land only bears a thin crop of grass in the spring-time, which forms but scanty pasturage for the cattle. The *bellān*, a kind of thorny shrub, also grows on this poor sort of land. It is collected in large quantities by the charcoal-burners, and when burnt with *jift*<sup>1</sup> it gives a tremendous heat and is valuable for fuel. Sometimes the dry grass and herbage on such land is set on fire, and the hill, by this means, is slightly manured, but manure does not enter into the farming operations of the Fellahin. Both the supply and the means of transport are wanting, so it is only used in the gardens and occasionally in the olive and fig plantations.

*Ard majamid* (dead land) is land which has not been under cultivation for many years. If reclaimed, it becomes the *mulk* of the reclaimer. In Nazareth I have seen many good vineyards which the owners had obtained in this manner, through cultivation.

*Arādi mujhule* (unknown land) is deserted land which has been left vacant either by the death of the owner, or by his sudden departure, which not unfrequently occurs in the event of his being in debt, or much behind-hand with the taxes. Such land falls to the Crown according to the class to which it originally belonged.

Nothing affects the agriculture of a country so much as the climate. In Palestine the year is really divided into two parts—the dry season and the rainy season. As a rule, the rainy season lasts from the middle of October until about the end of April, and the dry season the rest of the year, but sometimes the rains do not commence until November or December. These months and January are generally very wet, and rain will fall almost incessantly for a week at a time. The late rains fall in March and April, but from May the vegetation depends for moisture on the dampness of the earth and the heavy night dew (*nada'*). During six months not a drop of rain ever falls, save in a very exceptional year. The Fellahin, like ourselves, divide their year into four seasons, *rabia'*, *sayf*, *kharif*, and *shita'*—spring, summer, autumn, and winter. The spring begins in February, which is much the same as our April, an uncertain, showery month; still, according to the Fellahin saying, February “blows with the breath of summer.” March is called the month of earthquakes and storms, but “the shepherd can dry himself without fire,” namely, in the warm sun. The late rains are considered so precious that there is a saying to the effect that April rain does more good than the plough and the oxen. In July the heat becomes excessive.

<sup>1</sup> The remains of the olives after the oil has been pressed out.

Sometimes as early as October, but oftener about the beginning of December, when the rains have softened the cracked and burnt-up earth, the Fellah puts in the winter seed, wheat, barley, and lentils. The earth is broken up with a most primitive plough, in fact, the surface of the ground is scratched up rather than turned, the furrow never being deep. The plough is drawn by a yoke of oxen, or an ox and an ass, and sometimes by a camel, but very rarely by a horse. The ploughman urges on the animals with a long staff furnished with an iron point; this he also uses for breaking up the clods of earth. Except in the case of young animals not used to the plough, the progress is very slow. When the animals are their own, or if they happen to be ploughing for someone else, the Fellah does not hurry them. The plougher will often pass over deeply-rooted thorns rather than take the trouble to press more heavily on the plough. Where, from the rocky nature of the ground, or from a thick growth of thorns, the ploughing is very difficult, a sort of pickaxe or hatchet is also used. Many bits of stony ground, especially amongst the mountains, are only picked up, and light ground which can be worked without being moistened is sometimes merely sown. In such ground the seed springs up directly after the rain and yields an early crop. But in the absence of rain, seed thus sown is often lost. The putting in of the winter crops often lasts till January; it is slow work, for some of the people have to travel with their oxen a two or three hours' journey before reaching their land, and have to return again in the evening. The winter crops are succeeded by the summer crops of dura and sesam, which grow in the dry season. A season of heavy rains is always followed by an abundant harvest, for the moisture sinks deep into the earth, and is, so to speak, stored up. Tobacco, cotton, cucumbers, and melons are also grown in the summer. They are planted after the rains, and ripen during the hot months, the heavy night dew aiding their growth.

It has been already mentioned that by far the greater part of the cultivated land is not private, but government property, either *miri* or *wakūf*, and that the cultivator is merely the holder. Each district has certain tracts of such lands, and after the rains they are let to the different inhabitants in separate plots. The division is decided by lottery. Herr Schick has given an account of the manner in which this lottery takes place. All those who are desirous of land assemble in the *sāha* (an open place generally in front of the inns). The Imam, or *khatib*, who is writer, accountant, and general archivist to the whole village, presides over this meeting. The would-be cultivators notify how many ploughs they can muster. If a man has only a half-share in one, he joins another man with a like share. Then the whole number is divided into classes. Supposing the total number of ploughs to be forty, these would be divided into four classes of ten, and each class would choose a Sheikh to represent them. The land of course varies in quality, and this division into classes makes the distribution simpler. Say, they are four classes, the land is divided into four equal portions, so that each class may have good as well as bad. When the Sheikhs have agreed that the division is fair, the lots are drawn.

Each of the sheikhs put some little thing into the *khatib's* bag. Then the *khatib* calls out the name of one of the divisions, and some passing child is made to draw out one of the things from the bag, and to whichever Sheikh it belongs, to his class belongs the division named by the *khatib*. This decided, the Sheikhs have to determine the individual distribution of the land. In the case of ten ploughs to a class, they do not each receive a tenth piece of the whole, but, in order to make it as fair as possible, the land is divided into strips, so that each portion consists of a collection of strips in different parts of the village lands. The boundaries are marked by furrows or stones, and to move a neighbour's landmark is still accounted an "accursed deed," as in the days of ancient Israel (Deut. xix. 4).

The harvest begins as early as the middle of April or the beginning of May in the valleys, but later in the mountains. In the wide-spreading plains of Gaza, Esdraelon, and Jaffa, the reaping and transport of grain employs many hands, and attracts numbers of poorer Fellahin from their own villages to act as reapers, whilst many poor widows go with their children to glean. Every evening these latter thresh their gleanings with a stone or a piece of wood. I have often known poor women, who, after a few weeks' gleaning, returned home with enough grain to carry them through the whole year. The reapers generally wear a leathern apron to protect their chest and legs. The grain is cut down with a *manjal*, or sickle, but not very close to the ground. As soon as he has an armful, the reaper binds it into a shock, and throws it on one side. These shocks are collected into bundles and carried by donkeys or camels to the threshing-floor. In spite of the great heat, the work of harvesting is always done cheerfully, and the song of the men and the shrill *zagharit* of the women may often be heard floating over the hills and valleys.

The threshing-floor is a flat place in the neighbourhood of the village. If possible, a rocky place is chosen, so that it may be easily swept. Where this is not obtainable, a hard, flat piece of ground is made to answer the purpose. The floor is common property, but each thresher keeps to a certain part of it. For four months the Fellah has nothing to fear from rain or bad weather. During that time he almost lives at the *beiyaddir* (threshing-floor) and some of the villages are nearly deserted, at least by the men. The wheat, &c., is spread out, and the oxen and asses are driven round so many hours a-day to tread out the grain with their hoofs, at the same time treading and softening the straw so that it becomes fit for fodder. This straw is called *tibn*, bundles of ordinary straw and stubble they call *kash*. The animals as a rule are not muzzled. Another method is the use of a weighty plank, into the under side of which are sunk a number of small bits of basalt stone, forming kind of teeth. This instrument, called a *mōrej*, and made somewhat in the fashion of a sledge, is drawn by a horse over the heap of unthreshed barley or wheat, and crushes out the grain partly by its weight, for the driver sits upon it, and partly by the sharp teeth which tear the corn. The grain being separated from the straw, the work of winnowing begins. This must be done whenever there is a gentle breeze, for with too much or too little wind it is

equally impossible. The threshed grain is tossed with a three-pronged wooden fork ; the wind scatters the chaff to a distance, and carries away the dust. The grain is next collected into large heaps, and arranged in certain ways so that it cannot be disturbed without the knowledge of the owner. Besides this, the floors are constantly watched, and at night the owners generally sleep beside their grain. Great care is taken to guard against fire ; a really destructive one is of very rare occurrence. From the grain thus stored the '*ashr*, or tithes, are assessed and are paid direct to the government or to the *wakūf*. The extortion and oppression which results from this system is but too well known.

Very often a portion of a peasant's harvest is due to some townsman from whom he has borrowed money, and this is always claimed after the threshing, excepting when the negligence of the lender, or some stratagem on the part of the borrower, delays the evil day. The Fellah finds it very easy to borrow money, but thinks it very hard to be obliged to pay it back. If a ploughman has been employed, he now receives what is due to him. The *khatib*, too, has his reward. This worthy not unfrequently acts in the capacity of village barber. In short, when the Fellah requires anything, and has no money, he puts off payment until the "time of threshing," and then everyone seeks as speedily as possible the settlement of their claims. Dervishes, poor priests, the blind, and the lepers all make a pilgrimage to the *bedar*, and seldom leave it empty-handed. Many a small peasant, after he has settled the numerous just and unjust claims on his produce, has scarcely enough grain left to carry on his family until the next harvest, and many, after a few months, have again to borrow money in the city on the same security. The well-to-do Fellah carries his grain away in sacks on donkeys or camels, and sells what he does not want at the corn-market. Sometimes it is carried long distances. Every year lines of grain-laden camels are driven from Hauran to Nâblus and Jerusalem. A great deal is also bought up by brokers and sent to Jaffa, Haifa, and Akka. The rest of the grain is stored in magazines, dry rooms or underground granaries ; and the straw kept for the cattle is also stored in dry places, very often in caves in the rocks. On an average the crop shows a return of six-fold the amount sown ; twelve-fold is considered very good, but the sixty or a hundred-fold of the New Testament is not yielded in the present day.

The measure by which the Fellahin divide their land is the *feddān*. It is decided by the amount which a man with a yoke of oxen can plough per day, and is therefore a most uncertain measure.

Besides the cultivation of grain, which forms the chief employment of the people dwelling in the great plains, the care of the vineyards, and the fig and olive plantations, takes a good deal of time and attention.

Vines are generally planted in the hilly districts, the slopes and natural terraces being well suited for them, whilst such rocky land is useless for cultivating grain. Many of the villages own fine vineyards, some near, some at a distance, but unluckily large tracts of land, well suited for the purpose, and apparently used for it in former times, now lie uncultivated.

The vineyards are enclosed by stone walls or cactus hedges. With the somewhat too plentiful supply of stones, artificial terraces are made on which the vine can climb and hang over. In some places the vines are allowed to trail on the ground, as in Nazareth and Ramleh ; in others they are trained upright, as in Kolonia and Abu Ghosh, near Jerusalem. A watch-tower is built in the vineyards, generally of large stones without mortar, and on the top of it is a little hut roofed with branches. From this coign of vantage the vineyard can be overlooked and watched ; near it there is often an arbour formed of rough tree stems, and covered with vines. There are no wine-presses. The Fellah does not understand the art of making wine, and the majority of them being Mussulmans, they dare not attempt it. In many of the vineyards the old wine-presses of the Canaanites and Hebrews are still to be found in the form of two basins hewn in the rock, one into which the grapes were pressed, the other, on rather a lower level, for the juice to run into, by means of a connecting channel.

The Fellahin of Bethlehem and Beit Jala certainly attempt to make wine, but as they neither understand the process nor have any means of keeping it when made, the result is very poor stuff. The work in the vineyards consists in hoeing and breaking up the ground several times after the rains, and in pruning the vines. Bits of rock are carefully taken out of the ground, but beyond this the Fellah bestows but little pains on his vineyard. A newly planted vineyard will bear fruit in three years. All kinds of fruit trees as well as vines are planted in the vineyards—fig-trees, pomegranate, apple, pear, apricot, peach, quince, and mulberry trees. Directly the fruit is of any size the owner's family watch over it, and as soon as it becomes eatable they take up their abode at the vineyard, and remain there until it is all over. Everyone tries to pass some weeks or months during the hot unwholesome summer in a vineyard. Those who do not possess one hire a portion of one, and the well-to-do townsman counts himself lucky if he can camp out with his wife and children in a vineyard, living in a tent or a booth. Few noble families seeking change of air and scene at Ems or Kissengen are as happy as the Arabs under the shade of their fig-trees. A greater part of the daily food of the family then consists of bread and fruit. At this time of year many of the poorest people about Lydda and Jaffa subsist almost entirely on *sabr* and a little bread. The grapes which have not been consumed are carried in boxes or baskets to the next market, or to villages which have no vineyards. At these latter they are often exchanged for grain, the people being usually employed in threshing. Hebron is celebrated for its grapes, and so also is Es Salt, on the other side of Jordan, from whence come the much-prized "Cibebeen."

In some neighbourhoods, instead of vineyards there are fig-gardens. The district around Bethel, and as far as the beginning of the Nâblus valley, is famed for them. A good portion of the figs (*tîn*), of which there are various sorts, are eaten when ripe, but the greater portion of them are dried in the sun and kept for winter consumption. To lay in a sufficient

quantity of dried figs is an essential part of the provisioning of a well-ordered Fellahin household. Dried figs are also used for producing spirit. The fig-gardens are sometimes dug up or hoed, but no further attention is paid them.

The finest plantations of olives are in the Nâblus district, but nearly every village has its larger or smaller grove. There is no doubt that the olive-tree is one of the most valuable products of the country, and that it could be made a still greater source of revenue than it is at present. It requires but little attention, and lives and yields fruit even when neglected. It only requires grafting and a little digging up and clearing out, and this done, it yields a plentiful crop in return for the small amount of pains bestowed upon it. The Fellahin say that the vine is a *sitt*, a delicate town lady who requires a great deal of care and attention; the fig, on the contrary, is a *fellaha*, a strong country woman who can flourish without such tender care, but the olive-tree is a bold *bedawije*, who, in spite of neglect and hardship, remains a strong and useful Arab-wife.

The olives ripen towards the end of the summer; the trees are then beaten with long sticks, care being taken not to destroy the young leaves and shoots. The fruit is collected and spread out on the roofs, or somewhere, and then put into heaps for a little while in order that it may slightly ferment, after which it is taken to the oil-press, where it is crushed under a heavy millstone and, packed in little straw baskets, is finally pressed. The oil (*zayt*) runs into a little cemented cistern, from which it is drawn in leather bottles or large earthenware jars for carrying away. The Fellah uses it both for light and nourishment. If he has nothing better, he is content to eat some bread soaked in oil. It is also used a great deal in the town cookery, but as a means of light it has been almost superseded by petroleum. A great deal of inferior olive oil is used for making soap, and some years a great deal of oil is exported to France and Italy. The *jift*, or refuse of the olives, is used for fuel, having great properties of heat.

With regard to vegetables, their cultivation is only successful where irrigation is possible, though there are a few kinds which will grow without such, as gherkins, vegetable marrows, and tomatoes. Those which will grow dry are called *ba'l*, those which require water, *saki*. In irrigated gardens all sorts of vegetables are planted, cabbages, turnips, pepper plants, radishes, egg plants, and sugar peas. If the water for several gardens is supplied by one spring, a fixed time is arranged for each owner to turn the water in his channel on to his land. The fruitfulness of the land when irrigated is really astonishing.

In cattle breeding the Fellahin are not successful. The oxen and cows are under-sized, and are kept entirely for agricultural purposes; it is only when they are of no further use for work that they are sold to the butcher. Fattened cattle are unknown. Very few sheep are kept, and mutton, which is the favourite meat, is either obtained from the Bedawin, or else it is brought from Kurdistan or Hedschaz. The Fellahin, however, keep a great number of goats; cheese is made of their milk, and also the *laben*,

of which the Arabs are so fond. Butter is but little made, and *samm*, a kind of ghee, is seldom used except by the Bedawīn. The best time for dairy produce is in the spring, when the early herbage appears, but when this is dried up a bad time begins for the unlucky cattle. The goats fare best, for they are turned out in all weathers, and can often find food on the hills. When the season is very bad, they are given oil-cake made from sesam. Sheep, and even goats, have a hard struggle to subsist through the winter months, and many an animal dies a miserable death for want of proper nourishment and care. Oxen and cows are fed throughout the winter on *tibn*, or crushed straw. Living the hard life that he does himself, the Fellah can hardly be expected to take much care of his cattle. If one animal after another dies from want of care, it is the will of Allah, and he must submit. He bears it philosophically, and tries by cheating and deception to recover the loss.

A townsman once entrusted a Fellah in Siloah with a number of goats in which they were "to go halves," that is to say, that for the trouble and cost of maintaining the whole, half the goats and half their offspring were to become the property of the Fellah. This sort of partnership is often entered into in the case of a horse. After a time the townsman sent to inquire how the little flock was getting on, and received the joyful news—*walladen*—"they have kids." The townsman now hoped for a good supply of milk, but soon came the unwelcome intelligence—they are giving no milk—and a little later on came word that they were dead. Whether it was all true, or whether the Fellah had over-reached him, the townsman could never ascertain. In the spring and early summer, when there is good stubble-feeding for the cattle, the cowherd drives them to the fields every morning, and brings them back at night.

If, as it often happens in the colder districts, no grass is to be found, the larger cattle owners depart with their cattle to warmer lands near the Jordan Valley and winter there, living in the open by day, and taking shelter at night in the natural caves with which the country abounds.

And here I must close these notes on the rural economy of the Fellahin. To enter into fuller details would swell them from a paper into a volume.

### THE NAMELESS CITY.

The position of the city where Saul met Samuel (1 Sam. ix) is without doubt the most perplexing question in Biblical topography. We seem to be hopelessly involved in the following dilemma : Saul, in walking from a city apparently *north* of Jerusalem to his destination also *north* of Jerusalem, passes Rachel's sepulchre, four miles *south* of it. How is this apparent contradiction to be satisfactorily explained ?

It is proposed to show (I) that the nameless city was certainly Ramah, where Samuel usually lived and was buried ; (II) that it was close to

Rachel's sepulchre, and therefore (so far as I can see) on the Beit Jâla hill ; and (III) that it was identical with Ramathaim-Zophim.

The chapter on the Bakooosh cottage in "Finn's Byeways" led me three years ago confidently to place the city two or three miles further south, near Solomon's pools. Further consideration demanded by Captain Conder's objections (1879, 171 ; 1880, 104), and especially by Lieutenant Mantell's careful report (1882, 165), apparently forces me to place it *at or near* Beit Jâla. It would, however, be well if the few seeming points of difference between that report and Mr. Finn's remarks could be fully explained.

The following points seem to me to admit of no dispute :—

1. Kubbet Rahil is practically the correct site of Rachel's sepulchre (1880, 241).
2. Saul's destination was either Gibeah, or possibly Jerusalem (1 Chron. viii, 32) or Zelah (2 Sam. xxi, 14) ; at any rate, it was north of the latitude of Rachel's sepulchre.
3. Saul *naturally, i.e., without going out of his way*, passed on his return near that sepulchre.

Common sense seems to insist on this last condition, and so we may reject off-hand all proposed sites that do not satisfy it. Accordingly, Dr. Robinson, after proposing Sôba, practically withdraws it on account of the circuitous route which Saul would have to take. More recently Mr. Henderson (1882, 63), supported by Captain Conder (157), would identify Kirjath'-Erma not only with Kirjath-Jearim but also with "the nameless city." Two fatal objections why Khirjath'-Erma could not be the former place remain as yet unanswered (61 ; against its being the latter, stands the irresistible condition 3. The Survey Map proves a very effective weapon against error, and gives the happy despatch to many wrong identifications, and not least to Kirjath'-Erma. For measurement shows the following results :—

From Kirjath'-Erma to Gibeah is about 11 miles.

"     "	Rachel's sepulchre	8     "
"     "	Rachel's sepulchre to Gibeah	8     "

It is absurd to suppose that Saul would travel along two sides of a triangle instead of the third, and that in going from Kirjath'-Erma to Gibeah (64) he would *go round* by Rachel's sepulchre, *south* of the latitude of Kirjath'-Erma.

"The nameless city" cannot have been to the north of the latitude of Rachel's sepulchre, and therefore it was not at either Bethel or Gilgal or Mizpah or Kirjath-Jearim, which has never (so far as I know) been placed at all to the south of Rachel's sepulchre. All such proposed sites stand condemned by condition 3.

1. The following points seem to indicate that the city was Ramah, while *e* settles the question decisively.

a. Josephus calls it Ramah. Formerly I thought his statement an "unlucky conjecture." Now I believe the story strictly requires it.

- b. Though Ramah is not named in ch. ix, x, it is met with in viii, 4, where the story begins.
- c. It is objected (1882, 63) that Samuel is not once spoken of as "dwelling" in the city. This omission, however, has no force, since Ahijah the Shilonite is not said to dwell at Shiloh (1 Kings xiv, 2, 4.)
- d. It is urged again (63) that the words (ix, 12, 13), "He came *to-day* to the city; for the people have a great sacrifice on the high place. . . . The people are not accustomed to eat till he comes, for he blesses the sacrifice," suggest that Samuel was only "therefore the occasion of the sacrificial feast."

The Speaker's Commentary, however, points out that "to-day" may only mean "now, just now." Samuel may quite recently have come into the city from the fields outside, or from out of his house. Further, it is hardly credible that Samuel had arrived at the city for the first time on that day, since it is stated (ix, 15), "The Lord had told Samuel a day before Saul came, saying, To-morrow about this time I will send thee a man out of the land of Benjamin." Surely, after this, to go to another city would be exactly what Samuel would *not* do.

- e. The conclusive point, however, is that Samuel's house was in the city (ix, 18), and so it is specially noted of Ramah in vii, 17, "There was his house." One who took no bribes, and lived in such retirement that he was not even by sight known to Saul, would certainly not have both an object and the means for keeping up, besides his home at Ramah, a second house and cook in another city quite distinct from the four holy places named above.
- f. Lastly, Ramah was a most suitable place (1882, 64) for a great sacrifice, for "there Samuel judged Israel, and there he built an altar unto the Lord" (vii, 17). I conclude, therefore, that the city certainly was Ramah, the dwelling-place of Samuel.

II. Its position was south of the latitude of Rachel's sepulchre. This seems at first sight to open a wide field. Jebel Fureidis has been suggested by Gesenius; Rameh, north of Hebron, by Lieutenant Van de Velde on account of the name. There are, however, too many hills and Ramahs in Southern Palestine for elevation and name to be of much use.

Perhaps the words in ix, 4, 5, may imply that the land of Zuph, and therefore the city, was *in* or *near* the land of the Benjamites. Again, on the third day towards evening, when their bread was spent, Saul and his servant came near the city, and the former proposed to return home. Probably there was time to reach it before dark. Happily there is no need to press these points, as the sacred narrative itself fixes the position of the city close to Rachel's sepulchre. It is stated in x, 2, "When thou art departed from me to-day, then thou shalt find two men by Rachel's sepulchre." Mr. Henderson has for three years made the admission though it really tells against his site at Kirjath-'Erma) that these words indicate (1879) "that *just on leaving Samuel, immediately* therefore, Saul

would be at that spot ; " and again, that (1882, 64) "the prophet anointed the king, *not far from Rachel's sepulchre.*"

This witness is true. It is a mistake, however, to give Samuel several miles' walk in the early morning, for the anointing took place not only not far from Rachel's sepulchre, but also *close to the city*; as they were going down to the end of the city, Samuel said to Saul, ". . . stand thou still. . . . Then Samuel took a vial of oil," &c. (1 Sam. ix, 27; x, 1). Therefore the city itself was not far from Rachel's sepulchre.

The place thus named Ramah, and situated near Rachel's sepulchre, was further in "the land of Zuph." It is a remarkable coincidence that Elkanah or one of his ancestors named Zuph was an Ephrathite, and so was connected with Bethlehem or Ephrath (1 Sam. i, 1); while the Kohathite Levites, to which family Zuph and Samuel belonged, had a very strong reason for being partial to the neighbourhood of Bethlehem. From this Zuph, part of the adjoining country may easily have got the name of "the land of Zuph."

The existence of a Ramah near Bethlehem, which has thus been proved, completes the adaptation of Jer. xxxi, 15, to the slaughter of the Innocents (Matt. ii, 18) "in Bethlehem and in all the *coasts* thereof." Then literally "In *Rama* was there a voice heard. . . . Rachel weeping for her children."

We have now to search for a site not far from Rachel's sepulchre which satisfies the local indications of 1 Sam. ix, x.

- (1.) There was an ascent to the city from the direction of Saul's approach, down which apparently the maidens were going to draw water. On this side there must be a water supply.
- (2.) There was descent in the direction of the way towards Rachel's sepulchre (ix, 27).
- (3.) There was higher ground adjoining—the site of the high place.
- (4.) There ought to be ancient Jewish tombs on the hill.
- (5.) Possibly we ought to find near it something answering to the great well in Sechu. Besides, we have the expression, "Naioth in Ramah."

Is there any suitable place possessing these characteristics? Bethlehem itself, which Captain Conder has now discarded for Kirjath-'Erma, was once (1879, 171) suggested by him. It is, however, inadmissible, since from Bethlehem Samuel (1 Sam. xvi, 13) returned to Ramah. The only hill that seems to me available is that of Beit Jâla, and this I believe to be the right spot.

To suit (1) there is a cistern on the northern side called Bir Auna, and a spring and trough named Hand Kibryan on the south-west of the hill. From one of these sides Saul might have approached the city on this hill, and in both cases there is an ascent.

To suit (2) there is a descent from the hill in the direction of Rachel's sepulchre.

To suit (3) there is higher ground behind the present village of Beit Jâla.

To suit (4) it may be stated that Captain Conder has suggested **Beit Jâla** as a possible site for Gallim.

It is probable, then, that old tombs have been already discovered there, or sufficient remains to prove that it is an ancient site.

I no longer stand in need of the argument I wished to draw from the identification of the places named by Samuel, with various spots within view, when he anointed Saul. I may state, however, that from the **Beit Jâla** hill Rachel's sepulchre is well in view; Jerusalem may also be seen, and probably the Mount of Olives, as well as the hill south of Jerusalem (1879, 130).

The sepulchres on the Bakoosh hill described by Lieutenant Mantell seem to me to point to the former existence of habitations close by, which must, I fear, always remain a *nameless city*.

III. Having proved that "the nameless city" was really Ramah, Samuel's ordinary residence, and that it was situated on the **Beit Jâla** hill, we now come to the difficult question how such a position can be reconciled with 1 Sam. i, 1, "There was a man of Ramathaim-Zophim, of Mount Ephraim, and his name was Elkanah . . . the son of Zuph, an Ephrathite."

The following explanations suggest themselves:—

1. Elkanah may have formerly lived in Ramathaim-Zophim, in **Mount Ephraim**, but removed to the Ramah near Bethlehem before Samuel was born.
2. He may have been living in Ramathaim-Zophim, in **Mount Ephraim** when Samuel was born, and afterwards he or Samuel may have removed to the other Ramah.
3. He may have been an inhabitant of Ramathaim-Zophim, but have lived originally in Mount Ephraim.
4. Mount Ephraim may have reached to Bethlehem.
5. Mount Ephron was the original reading, and, not being understood, was altered to the well known Mount Ephraim.
6. Mount Ephrath (as the name of the district near Bethlehem or Ephrata—like Mount Bethel near Bethel) was the original reading, and, being an unusual expression, was somehow changed into Mount Ephraim.

Of these, I reject 1–4 as quite indmissible, though it is remarkable that, though Samuel was buried at Ramah, it is not added "in the sepulchre of his father," as is the case with most of the Judges; 5 and 6 alone seem to me credible, and I prefer 6, since all the change needed is to read **נ** for **ן**.

Dr. Robinson says that "Ramathaim-Zophim probably signifies nothing more than Ramah of the Zuphites or descendants of Zuph" in other words, Ramah in the land of Zuph.

A report by Lieutenant Mantell on the **Beit Jâla** hill (like those on the Bakoosh hill and Khurbet Adasah) would doubtless be most interesting and valuable.

August 1st, 1882.

W. F. BIRCH.

## EMMAUS IDENTIFIED.

BY MRS. FINN.

AMONG the many questions of interest that occupied our attention while living in Jerusalem, there was none more attractive than this "Where was the Emmaus of St. Luke's Gospel?"

During the first ten years after our arrival in Palestine, we had sought the reply, but had found none that could be considered satisfactory, although various travellers and writers on the topography of Palestine had dealt on the question.

Dr. Robinson, successful as he had been beyond all that went before him in identifying long lost sites, had in this instance resorted to that refuge for distressed critics, "a different reading" of the sacred text, and suggested that St. Luke had originally written as to the distance of Emmaus from Jerusalem—not three score furlongs, but *one hundred* and three score furlongs. Dr. Robinson thought that this altered reading would allow of the Emmaus of St. Luke's Gospel being identified with the Emmaus afterwards called Nicopolis, on the Plain of Sharon, at the foot of the Judaean mountains, twenty-two Roman miles distant from Jerusalem.

Is not Nicopolis rather 176 than 160 furlongs distant from Jerusalem?<sup>1</sup>

In considering the matter on the spot, however, it appeared to us that very serious difficulties present themselves against the attempt to apply the narrative in St. Luke's Gospel to any place so far from Jerusalem as the Nicopolis-Emmaus.

First of all, the events occurred in Passover Week, which all devout Israelites spent at, if not in Jerusalem. Nicopolis-Emmaus is a distant place out of the hill country of Judah.

Secondly, a journey of twenty miles on foot up steep mountain passes, is altogether at variance with the circumstances under which the two disciples returned from Emmaus to Jerusalem that evening. On their arrival at the village, they had dissuaded our Lord from going further, because the day was "far spent" (declined). It was towards evening when at their entreaty he went in to tarry with them. Then came the evening meal, which according to the custom of the country is not commenced till at or after sunset. At Passover or Easter time, the sun sets soon after six o'clock, and there is but a short twilight in Palestine. When the disciples had discovered who their guest was, they "rose up that same hour" in their eagerness to communicate the glad

<sup>1</sup> Josephus also mentions an Emmaus at 60 furlongs from Jerusalem; but Dr. Robinson deals with that in the same way, and suggests "another reading" for Josephus also. Dr. Tregelles, in a letter to Dr. H. Bonar, shows clearly that the evidence of the best MSS. in favour of the revised reading of Luke xxiv, 13, is thoroughly preponderating, and decisive in favour of the 60 furlongs.—"Land of Promise," by H. Bonar, DD., p. 538.

tidings to the rest of the disciples. But it is highly improbable that they had to walk a distance of twenty miles up a continuous ascent of above 2,000 feet from the level of the plain to Jerusalem. Had they made such a journey as that, most of it steep climbing, they would not have reached Jerusalem much before midnight, and long after the time when Easterns go to rest. But on arriving they found the eleven still together. They also must have been at their sunset meal—the last for the day. But if it were 60 furlongs ( $7\frac{1}{2}$  Roman miles), that distance could have been traversed within two hours. They arrived and told their wonderful history—and as they yet spake (Luke xxiv, 36), the Lord appeared to them, finding them still “at meat” (*ἀνακειμένοις*, Mark xvi, 14), and offered to share the scarce-finished meal: “have ye here any meat?” (food). They gave Him a piece of broiled fish and of an honey-comb, and He did eat before them, and then entered upon a conversation which could not have been a short one.

All this implies that the two disciples must have got back from Emmaus early in the night.

The word used by St. Luke in describing Emmaus being *κωμὴ*, “a village” or “hamlet,” would not be applied to the Emmaus-Nicopolis on the plain, which Josephus expressly calls a *city*, and which he declares to have been well fortified with strong walls and towers (see “Ant.,” xii, 7, 3; xiii, 1, 3; “Wars,” iii, 3, 5). Jews while keeping their Passover as these disciples were doing, would scarcely go to any other *city* than Jerusalem.

It seemed to us that the Emmaus of St. Luke’s Gospel must have been a country village within easy reach of Jerusalem, the walk to which would in no way interfere with the due observance of the great Paschal Festival.

All these considerations led us to continue our search for Emmaus within a circle of 60 furlongs around Jerusalem.

The only indications in the Bible are those referred to above, *i.e.*, the name “Emmaus,” the distance “60 furlongs;” and the size, “a village.” Josephus also mentions an Emmaus, a Roman colony, at 60 furlongs from Jerusalem, of which more hereafter.

And with regard to the name *Emmaus*, Josephus gave us a clue in its derivation and meaning, a clue of immense value. He mentions a third Emmaus, distinct from the Emmaus-Nicopolis on the plain, and from the Emmaus colony near Jerusalem.

In “Ant.,” xviii, 2, 3, when describing Tiberias at the Lake of Gennesaret, he says there are warm baths at a little distance in a village named Emmaus. In “Wars,” iv, 1, 3, he tells us that “Vespasian removed from Emmaus where he had pitched his camp before the city Tiberias,” and adds, “now Emmaus if it be interpreted may be rendered *a warm bath*, for therein is a spring of warm water useful for healing.”

This rendering of the word is undoubtedly correct, Emmaus being merely the Greek form of the Hebrew חַמָת Hamath.

The place near to Tiberias, which Josephus calls Emmaus, is called

Hamath in Joshua xix, 35, and is to this day known by the Arabic equivalent word *Hammām*, "hot baths."

The Syriac form of the word is Amatha, given by Eusebius and Jerome as the name of the hot springs at Godera (Um knis) which are also called Hammām by the Arabs of the present day (see also Reland's "Palestine," pp. 30, 703, 755, 758).

The Emmaus-Nicopolis of the plain received its name from the fact that it also was remarkable for a fountain endued with virtue for healing man and beast, which is said to have been stopped up by Julian the Apostate. This fountain is mentioned by both Jewish and Christian writers (Reland, pp. 759, 760).<sup>1</sup>

The etymology of the name Emmaus led us to the conclusion that wherever the Emmaus of St. Luke might be, there must also have existed hot baths, and the modern Arabic use of the term Hammām as applied to baths generally, whether of natural hot springs, or of water artificially heated, led us further to the idea that St. Luke's Emmaus need not be a place of hot springs, but that it might possibly be a place where abundance of water had caused the establishment of artificial baths of some importance.

We convinced ourselves before long, that there is but one place within the circuit of 60 furlongs from Jerusalem, where there is a sufficiently copious spring of water for the supply of baths. That place is the pretty valley of Urtas, which is about  $7\frac{1}{2}$  Roman miles or 60 furlongs from Jerusalem, south of Bethlehem.

The valley descends from the ancient Etham (the fountain of which still bears that name), and passes round the base of the Herodium (or "Frank" mountain, called by the natives Jebel el Furaidis) on its way towards the Dead Sea.

These two places, Etham and Herodium, are among those whose distance from Jerusalem are specified by Josephus. He tells us that Etham was 50 furlongs off ("Ant.," viii, 7, 3), and that Herodium was 60 furlongs off ("Ant.," xiv, 13, 9, and "Ant.," xv, 11, 4).

Urtas, village and spring, lie between the two, and the difference between the 50 furlongs' distance of Etham from Jerusalem, and the 60 furlongs of Urtas, may be easily accounted for by the difference of the road to Urtas, which winds considerably, or by the relative position of the two places—the one higher, the other lower in the same valley.

The actual *distance* of Urtas from Jerusalem well answers the requirements of St. Luke's narrative.

<sup>1</sup> At the date of our search, we had not the aid of the Dictionary of the Bible, in which we afterwards found the argument against Nicopolis ably summed up, or of the "Geographie du Talmud" of M. Adolphe Neubauer.

M. Neubauer has a note on Emmaus, on p. 100 of his valuable work, and at pp. 34-38, he defines Emmaus and Hamath as being the usual appellation for thermal baths.

The Bible dictionary says that Emmaus has yet to be identified.

Nothing is more delightful on a spring afternoon than the 7 miles' walk across the Plain of Rephaim, past Rachel's tomb and Bethlehem, to this charming spot, the most charming and the most accessible from Jerusalem in the whole district.

There is here the most copious perennial spring of water to be found anywhere within the required distance from the Holy City.

It never fails, but runs with a strong stream in summer as well as winter, and it is altogether distinct from the spring at Etham, or from the other springs that supply the pools in the valley above.

The village is small, but there are remains of ancient buildings, and, indeed, it is easy to see that a village must always have existed here on account of the beautiful spring of water, yet being so near the fortified city of Etham, this probably never was no more than a village, and thus would answer to the terms used by St. Luke and by Josephus as to the size of the Emmaus to which they refer.

Here, then, is a place which fulfils the important requirements as to distance, size, and supply of water for baths.

But the name Emmaus, and its Hebrew and Arabic equivalents, were wanting, and, above all, where were the baths.

It was several years before we discovered any traces of either the name or of the baths.

While waiting for some discovery that might settle that decisive point, we studied with ever increasing interest all that served to throw light upon the past history of Urtas.

And first as to the name "Urtas,"—which has no meaning in modern Syro-Arabic nor in Hebrew, but is believed to be comparatively modern, and only a corruption of the Latin *Hortus* (garden), given to it at a period when Latin was much used and spoken in and around Bethlehem, close by.

This carries us back at least to the days of St. Jerome, whose memory is still fresh among the Christians of Bethlehem. There within the precincts of the great Convent of the Nativity is still existing the chamber where Jerome made his translation of the Hebrew scriptures into Latin. The short mile of hill and dale from thence to the valley of Urtas must often have been traversed by him and his companions—Paula with her daughter and others.

In the life of Vigilantius we get glimpses of the rural delights around Bethlehem. The city of David was then as now supplied with pure water from living springs, by the ancient aqueduct which winding around the hill sides, passes from Urtas, through Bethlehem to the Temple at Jerusalem. We know that Jerome and the Latin speaking Christians of his day regarded Urtas as the site of the Hortus conclusus, the "garden inclosed" of Solomon (Song of Solomon iv, 12). Had any Hebrew or Syrian name for Urtas been extant in Jerome's day he would surely have found and preserved it.

But the identification with the gardens of Solomon is reasonable. The proximity of the place to Bethlehem would in itself lead us to search here for the royal gardens.

Josephus tells us that they were at Etham ; the name Etham survives to this day as the name of a spring of water at the head of the valley, Ain Aitân. And the ancient city of Etham was doubtless on the mountain beside the spring. From 2 Chronicles xi, 6, we learn that Etham was near Bethlehem and Tekoa, which agrees well with the position of Urtas.

After Urtas Tekoa (now Tekua) is the very next town to Bethlehem. The Septuagint have placed Etân or Aitân among the cities of Judah, Bethlehem, Fagor, &c., inserted by them in Joshua xv. Fagor (now Faghoor) is the next important place of ancient date south of Urtas an hour distant. Josephus tells us that Etham "is very pleasant in fine gardens, and abounding in rivulets of water." No place but the Urtas valley would be thus described. He speaks of the early morning drives of King Solomon in his chariot to this delightful retreat ; and Urtas is the only place to which an easy pleasant drive across the plain would be possible.

The Song of Solomon is full of allusions to the charms of this garden, with its waters, its fragrant hills, its vineyards, its paradise (ch. iv, 13, rendered "orchard") of pomegranates and pleasant fruits.

In all points the Urtas valley with its fruit gardens and vineyards on the mountains around, fully coincides with the descriptive touches in that song.

The word *paradise* gives us a further clue. No ordinary garden or orchard can be justly described by the word *paradise* ; but only such a one as was the garden of Eden ; watered by a network of streams *parted* (Gen. ii, 10, "from thence it was *parted*") בַּיִת from the fountain head, into refreshing rivulets that keep up perennial verdure and a succession of pleasant fruits upon trees growing by the rivers of waters alluded to in Psalm i, the imagery of which is probably derived from this very spot.

In Ecclesiastes (ch. ii, 5, 6) Solomon speaks of his paradise : "I made me gardens and paradises (orchards), I made me pools of water."

We find both in the Urtas valley. The pools, ascribed by ancient local tradition to Solomon, and still called by the very same word as that used in the Hebrew text, lie with the system of aqueducts in the head of the valley just below Etham ; while the word paradise lingers in the same valley below Urtas, as the native name for the Herodium, *Jebel el Furaidis*, "Mount of the little Paradise."

The aqueducts are still existing which were carried from the one to the other.

There can be no doubt that the "little Paradise," which gave the name thus traditionally preserved, was the Paradise which Josephus says Herod the Great formed around the newly-built fortress tomb, where the Edomite king was afterwards buried.

This Paradise of Herod was but a revival by him of the Royal Paradise belonging to the Great Solomon, whom it was his constant ambition to rival and to outdo in his kingdom, his magnificence and his buildings, including the Temple on Jericho—the palace on Zion and the country retreat here in the loveliest vale of Judah's royal inheritance.

The name Etham, which the valley formerly had from the city above, had in all probability been superseded after the days of Solomon by that of "Paradise," and the transition to that of Hortus = Urtas is now difficult to understand.

But still this gives no clue to the name of Emmaus having belonged to Urtas—although Urtas was clearly the only place where baths could have been maintained, and although Urtas was at the distance which Josephus gives as that of an Emmaus existing in his time.

We now turned our attention to what Josephus says about this Emmaus. It is not much, yet he alludes to three particulars in which his Emmæus agrees with that of St. Luke's Gospel.

1. The name.
2. The distance—60 furlongs.
3. It was a place, or village,

*Xερπιον*, and therefore not the fortified city Emmaus-Nicopolis on the plain. But there is more than this to be got out of the notice of Josephus.

The position of Emmaus is indicated, and it is described as having been chosen for a Roman settlement of military colonists, 800 strong.

Jerusalem had fallen. Vespasian and Titus had returned to Rome. Lucilius Bassus was Legate in Judea.

The regular army had already been sent into other countries, excepting the 10th Legion, and some companies of horse and foot. The commander had attacked that citadel, which was in Herodium, Jebel Furaidis in the Urtas valley, and having taken it, he reduced Macherus, east of Jordan, which was then the most important fortress left in Jewish hands.

That taken, there remained but one stronghold, that of Masada, on the western cliffs, a few hours from Herodium on the way towards it (see Josephus, "Ant.", xiv, 13, 9).

Masada was seemingly impregnable, and it was in the hands of a powerful and desperate body of infuriate Jews, whom the Romans were resolved to subdue.

It was about this time that Caesar had ordered the lands of Judæa to be put up for sale, *all but one place*, which he "ordered to be reserved" for 800 men, whom he had dismissed from his army—which he gave them for habitation—it is called Emmaus, and is distant from Jerusalem three-score furlongs." ("Wars," vii, 6, 6.)

This place then must have combined advantages for colonial settlement with those of a central position among the mountain fastnesses, whence the Arabian and other tribes might be held in check, as well as the Jewish garrison at Musada.

What place so likely to attract the sagacious Romans as Urtas, with its copious supply of water from perennial springs, its rich soil, its admirable military position among the mountains with regard to Jerusalem, and to all the eastern and southern tribes—in the same valley as the Herodium (but just captured), and so near Musada as to prevent any hostile movement on part of the Jews in that fortress.

The Imperial Emmaus colony may well have been posted at Urtas—and the name Hirtus may possibly date from the occupation by these Roman soldiers, who would not easily abandon so fertile a spot when once they had it in possession—and after the Roman troops were withdrawn, the Latin speaking people at Bethlehem would naturally preserve the Latin name.

The present Fellaheen, who are so tenacious in the preservation of ancient Shemitic names, could give us no other name than Urtas, which has been used by them from time immemorial, but which has no meaning in their tongue. This fact alone points to the conclusion that this race did not directly succeed to the original Jewish owners, but that a Latin speaking colony had intervened for at least a temporary settlement.

Otherwise the ancient name would be still in use, as in so many hundreds of places where the Fellaheen have preserved them.

Nablous (Neapolis) for Shechem, and Sebastieh (Sebaste) for Samaria, are instances of Greek names which have in this manner supplanted older Hebrew names.

Urtas for Hirtus would be one more instance of similar change where an occupation of foreigners came between the ancient and the present possessors.

Not only are the position and character of the Urtas valley suitable for a Roman settlement, but in the village there are actual remains of a strong stone building, possibly a small fort. The character of the masonry points to the Roman age. Further down the valley there are remains of similar style, and massive masonry which the Fellaheen call "the Mills."

There is an instance at Kotonieh (the first station on the road to Jaffa, west of Jerusalem) of a Roman fort built like this in a commanding situation in a valley instead of on a height.

Kotonieh is acknowledged to have derived its present name from a Roman *colonia*, or military colony stationed there. Though also a watered valley, the position is not likely to have been the one chosen by the Roman Emperor for his Emmaus settlement, for it would have been altogether useless on this western side as a check on the eastern fortress of Musada, or on the mountain district in general, being too much off the upper plateau of highlands.

Having so far identified the Urtas valley with the Etham where Solomon had his gardens and paradise, and Herod the Great his paradise around the Herodium, and also as a suitable place for the Emmaus military colony, the *name* Emmaus still remained a difficulty.

Why should the Etham of early Jewish history have become Emmaus in Roman times?

And where were "the baths," which alone could have justified the name Emmaus?

The following circumstances led to the recovery of these missing links: the name Hammâm, which in Syro-Arabic represents the Greek Emmaus, and the ruins of sumptuous Roman baths.

In 1847 the rich soil and streams of living water in the Urtas valley, then deserted and desolate, had attracted the attention of John Meshullam, a British subject of Jewish birth. He sought and obtained the protection and assistance of the then British Consul (my husband), Mr. Finn, in establishing himself there upon lands leased from the Fellah proprietors. By the year 1856, a considerable part of the valley had been planted and restored to a condition of fertility and beauty. In that year I joined him in taking under cultivation a fresh tract, further down the valley.

Gardens and orchards, in fact "paradises," irrigated by streams from the fountain head, were once more formed in the valley-bed as of old.

At one part, however, progress was arrested, the ground could not be cleared as elsewhere, for planting; it was fully occupied beneath the surface by remains of buildings hitherto concealed by about 20 inches of soil, evidently washed down from above in course of ages. We had noticed before that when the stream of water reached this spot, it used to disappear as if into a chamber of some kind.

Early in 1857, in digging for the foundations of a retaining wall for a garden plot, we once more came upon these remains, and found excellent hewn stone lying loose from some former building, also a fragment of cornice, pieces of a stone door with a place for the bolt, a few copper coins (one of Constantine, the rest Cufic), and a small bit of glass mosaic.

What was our delight when, as we stood there watching the Fellah workmen, we caught from their lips the word "Hammâm," "baths."

"Hammâm!" we cried, "where is the Hammâm?" "Oh!" replied one standing by, "the Fellaheen here *always* call this spot the place of the Hammâm, and yon rock jutting out into the path they call *Leeyet al Hammâm*, "the promontory of the baths."

At last, then, here was the missing link, the name *Emmaus*. But how make certain that the name had real value. Where were the baths?

Several years passed before funds for making excavations were forthcoming.

But one thing became clearer each succeeding year, that in no other place within 60 furlongs of Jerusalem was water sufficient for maintaining baths to be found excepting at Urtas only.

At last, in 1861, Mr. Cyril Graham, whose discoveries east of Jordan had already cast so much light upon the literal accuracy of Holy Scripture, joined us in commencing diggings at the so-called Hammâm in Urtas.

Just before we began, there were dug up in a field adjoining that spot, two Corinthian capitals of extremely pure style, and a fragment of cornice, all of native limestone. This quickened our zeal. We set to work, and the very first thing that came to light, only a few feet below the surface, was a bath! lined with purest white marble in perfect preservation, 4 feet long by 3 feet 7 inches wide, and 3 feet 9 inches deep, having in it a step or seat for convenience of the bather.

The marble is foreign, apparently from Greece.

In this bath were found two bronze strigiles, or bath scrapers similar

to those found in the baths at Pompei. Also large quantities of coloured and gilt glass mosaics like those of Pompei, and those which ornament the dome of the rock on Moriah, the Churches of the Holy Sepulchre, and of the Nativity, and St. Sophia at Constantinople.

Next to this bath, we found another bath or tank, 23 feet by 18 feet, and 4½ feet deep. The cement still remains in considerable quantity on the floor and sides. We then found, at a higher level, above the marble bath, and communicating with it, another tank, 4 feet 4 inches long by 4 feet wide, and 4 feet deep.

In all of these were found glass mosaics ; in the largest there also lay a small fragment of a column of blue and white marble ; many pieces of thick greenish panes of glass, evidently window panes of the bath ; much white marble pavement ; one Jewish copper coin considerably worn ; several Cufic coins, and the ornamental hasp of a brass lock.

Higher again than the small tank, and communicating with it by a cylindrical bore through the massive stone wall, we next found a large pool (perhaps swimming bath), 51 feet wide, that is 30 cubits of 21 inches, by 8 feet deep. The length he could not then ascertain. It was quite filled with mould washed down in course of ages from the higher ground.

In this pool we found still more proofs of the costly and magnificent character of these baths. Buried in the earth, there lay the shaft of a column, 8 feet 8 inches long, and 3 feet 11 inches in circumference, also of pure white foreign marble ; and not far off three marble capitals of peculiar style, very richly and beautifully carved in a species of palm-leaf pattern, somewhat like Corinthian, and reminding us of the monolith at the Huldah Gate of the Temple on Moriah. The roof had doubtless been supported on pillars as in the baths of Caracalla at Rome.

Here were also fragments of very thin glass vessels and of ancient pottery ; bits of Roman tiles ; two little metal implements, apparently ear-picks ; a piece of a stylus of unknown material ; and fragments of marble pavement grooved so as to be bound together with metal clamps, which were still in some of the pieces.

There were a piece of an iron hinge, a rusty sickle, and a small bit of glass shaped like a solid trumpet (similar, as some one told us, to metal ones found at Pompei), also a fragment of glass, which bears on it marks of the casting process, such as one sees on glass cast nowadays. Cast glass has also been found in the baths at Pompei. The last, and perhaps the most interesting of the miscellaneous relies dug up, were small triangular pieces of black bituminous stone which had evidently been used in mosaic pavement.

This stone, found near the Dead Sea, is now used by the Bethlehemitites for small ornamental cups, vases, &c. But Josephus tells us of the use to which it was put in the days of King Solomon, as pavement on the road which he laid for chariots from this very place, Etham.

"Now Solomon had divine sagacity in all things, and was very diligent and studious to have all things done after an elegant manner, so he did

not neglect the care of the ways, but he laid a causeway of *black stone* along the road that led to Jerusalem, which was the royal city--both to render them easy for travellers, and to manifest the grandeur of his riches and government" ("Ant.", viii, 7, 3, 4).

The marble lined bath when laid open to view at once struck our Jewish friends as similar in arrangement to the Mikvah, or bath used for ceremonial ablutions at the synagogue. And they argued that this was proof of the whole being the work of their great King Solomon. It is of course possible that Solomon may have added baths to the luxuries of his country paradise--though not of the Roman style.

But the foreign marbles, the style of the capitals, the glass and the pottery, led us rather to ascribe them to Herod the Great, whose extraordinary love of luxury is well known, and who would gladly adopt the custom which had newly come in with the reign of Augustus Cæsar of establishing magnificent Royal Thermae. There was an unmistakable resemblance here to Roman baths. And Herod would naturally mingle Jewish arrangements with those which bespoke his Roman tastes. The only other sovereign by whom they might have been arranged was Constantine. But his residence at Jerusalem was too short for such an undertaking, and the baths must have existed before St. Luke and Josephus wrote about Emmaus, near Jerusalem.

Here, then, beyond all cavil or doubt, we had brought to light Emmaus, the Hammâm, the baths, at 60 furlongs from Jerusalem.

And it seems to me that while the accuracy of St. Luke and of Josephus are vindicated, we may easily account for the fact that Hamath, the purely Hebrew form of Emmaus, has not been recovered as attached to this spot. There are no natural *hot springs* here to deserve the name of Hamath. These are artificial Roman baths, just such as the proud luxurious Herod in his emulation of Cæsar, no less than of Solomon, would erect here at his little paradise and near his fortress at Herodium.<sup>1</sup> The Greek name Emmaus would naturally be used in those Greek speaking days for the little village, now that the ancient Etham higher up was no longer a strong city. As Emmaus only, not as Hamath, could it have been known to the writers of our Saviour's days. It was as such the creation of Herod. The mention of this place by this name by two writers of the Herodian period, St. Luke and Josephus, is one of those undesigned coincidences so invaluable in evidence.

This Emmaus was Emmaus *only* at the particular period when they were writing.

<sup>1</sup> Thermæ—hot-springs, meant properly warm springs or baths of warm water—but came to be applied to those magnificent edifices which grew up under the Empire in place of the simple balnea of the Republic. . . . . Writers, however, use these terms without distinction; thus the baths erected by Claudius Etruscus, the freed man of the Emperor Claudian, are styled by Statius *balnea*, and by Martial *Etrusci thermulæ*.—"Dict. Greek and Roman Antiquities," Art. *Balneæ*.

And when the splendid baths were laid in ruins the marble columns which had supported the roof, the capitals, the mosaics, and all the rest were mingled in general ruin, the baths lay buried under the ruins ; Emmaus disappeared and became known as the Hortus of King Herod (as of Solomon before him) to the Latin speaking soldier colonists of Titus who occupied the ground, aided perhaps by native Fellaheen. These latter in their turn swarmed over the land and took possession of it as Urtas, which it has remained till now.

All Jewish inhabitants must have disappeared and made way for the Roman soldiery, who would be at no pains to preserve the Hebrew name, otherwise it must have been handed on and preserved by the Fellaheen, whose language is so similar to Hebrew.

The marvellous fact remains that though the name of the village was lost, though the ruined baths were buried in the soil, these ignorant peasants had preserved to us in their unerring and imperishable tradition at the place, and the promontory of the Hammâm, the clue to the discovery of the long lost Emmaus, here at 60 furlongs from Jerusalem, with its baths of royal magnificence.

Another consideration of deep interest suggests itself in connection with the sacred history of this Emmaus. King Solomon would not have appropriated this valley for his country retreat, unless it had been his by inheritance from his father David, and his grandfather Jesse, the Bethlehemite. He could not otherwise have obtained it, for the law of Moses forbade the alienation of land from any family by purchase or sale (*Leviticus xxv, 23-31* ; *Numbers xxxvi, 7-9* ; *1 Kings xxi, 3* ; *Ezekiel xlvi, 18*).

Now if the Urtas valley from Etham downwards was the family property of David's Royal House, it must also have been the legitimate inheritance of Him Who was the lineal descendant of David—and as such the rightful Heir to his possessions and to his throne—the acknowledged Son of David.

What an unexpected interest this gives to the simple narrative of St. Luke's Gospel, in which is accorded how on the day of His Resurrection the Lord joined the two disciples on their way to Emmaus. Cleophas himself as connected with the family of David may have also had some inherited part or share in the valley as well as in Bethlehem close by. Eusebius in the "Onomasticon" says that Cleophas *was a native of Emmaus*.

The invitation addressed by the disciples to our Lord was not that of mere strangers visiting the village.

How familiar must every object have been to these wayfarers—how well known every step of the road across the plain, now green with springing corn and bright with flowers, how pleasant every turn of the sweet retired road that leads winding from Rachel's sepulchre along the hill sides in full view of Bethlehem, to the sheltered valley.

The Edomite usurper of David's throne had appropriated to his own use this possession of David's family. Josephus tells us ("Wars," vii, 8, 4) that

"he feared the multitude of the Jews lest they should depose him and restore their former kings to the government." He had tried by slaughter of the Innocents to destroy Him that was born at Bethlehem King of the Jews. Where was the Great Herod on that Easter evening when the risen son of David visited Emmaus with His two disciples? No man feared the tyrant now—he was dead thirty years before, and lying buried in his fortress-tomb on the summit of Herodium which looks down upon Bethlehem, and upon the Urtas valley.

Here, then, in the quiet village of Emmaus, the first meal was shared—the first bread broken, and the blessing given by our Lord. When the disciples saw Who He was, and rose up to go to Jerusalem, it was for no weary journey of twenty miles up steep mountain passes, but for a delightful walk by familiar paths, and across the smooth plain that they hastened forward to the Holy City—to find the eleven, and those that were with them, still assembled after supper.

This little company was shut in isolated and anxious, "for fear of the Jews." What a different meal had theirs been from the feasts going on that night among the thousands of Israel who were keeping holiday in Jerusalem.

Some at least among the disciples had been disabled according to Mosaic law—"defiled by reason of a dead body," when assisting at their Master's burial, and in visiting His grave.

For them there would be no further share in festive social gatherings, in the grand temple services or the solemn benedictions of the High Priest. Their Passover had been abruptly closed in grief. Now suddenly sorrow and perplexities are ended. The two arrive with glad tidings, and while yet they are speaking, the Master appears with peace upon His lips, and confirmation of the joyful tidings. The lonely meal is timed with high festival by presence of the Divine Guest Who shares it with them. The testimony of the two is placed beyond doubt, for He repeats to the whole company the arguments from the Law of Moses, the Prophets, and the Psalms which had been the subject of discourse that afternoon on the way to Emmaus.

May we not say that we now know where that highly honoured village lay, and that the Emmaus 60 furlongs from Jerusalem has been identified with Urtas by the ruins of Herod's costly baths?

The site of the royal gardens is still marked by trees bearing fruit in their season, nourished by refreshing streams, the mountains still breathe the fragrance of aromatic plants, the vineyards yield clusters of rich grapes, and pure waters are still carried by the ancient aqueduct from the fountain head to Bethlehem, and even sometimes to the Temple Courts on Moriah.

But the highest and most sacred interest of all that cleaves to this valley, this royal heritage (reserved unsold by the Royal Emperor when he ordered all other Judaean lands to be put up for auction), is for ever bound up with our Lord's visit to Emmaus on the day of His Resurrection with His two disciples.

THE  
PALESTINE EXPLORATION FUND

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NOTES AND NEWS.

IT is understood that the Porte is considering the whole question of exploration and excavations in the Turkish Empire, and that a new code of rules will before long become law. The conditions which will be laid down in the scheme under consideration are as yet unknown. We hope, however, that they will be favourable to the uninterrupted pursuit of such work as our own.

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Meantime, we are watching for an opportunity to carry on the work of our programme. If it be found impossible for the present to continue the Survey of Eastern Palestine, we shall have to attack other parts of the work, of equal importance, though not of such general interest. It has been decided to issue, as soon as possible, the portions already surveyed, and Captain Conder, when he returns to the Committee in May, will compile the Memoirs of this portion.

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The third volume of the Memoirs of the Western Survey, forming the fifth volume already issued, is now in course of publication. It contains Judæa, and as much of the south country as is included in the Survey. Subscribers who have not yet received their copies will be good enough to communicate with the Secretary.

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The printing of the Jerusalem volume has been commenced. This work will contain, after an introductory chapter on previous research in and about the city—  
(1) Colonel Warren's detailed account of all his own excavations; (2) an account of M. Clermont Ganneau's work; (3) an account of Captain Conder's work; (4) the German work in the Muristan and on Ophel; (5) the Siloam Stone and other inscriptions found in Jerusalem; (6) an architectural history of all the buildings in Jerusalem, with reference to the contemporary and later notices of these buildings, and a reconstruction of Constantine's Basilica, and the group of churches which succeeded it, by Captain Conder; (7) an account of

researches outside the city, also by Captain Conder; (8) a brief chronicle of the city, and a *résumé* of the controversy over the sites. This work will be, like the Memoirs, illustrated with woodcuts, plans, and maps, and will be accompanied by a portfolio of drawings, sections, and plans to illustrate Colonel Warren's papers. The book will not, like the Memoirs, be limited in number, though it forms a portion of the work called the "Survey of Western Palestine."

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Canon Tristram's "Flora and Fauna" will complete the work. As regards this volume the author writes: "What I propose to give is a careful catalogue of all the species existing in the country, giving the Linnean names and references to the original authority for each name, the Hebrew and Arabic vernacular names when such are known, the range of each species within the country, and also the extent of its geographical range elsewhere. In the case of forms of life peculiar to the country more details may be given. I also propose to figure all species peculiar to Palestine, and some of the rarest which extend beyond its limits, but have never yet been figured. The mammals and birds are being drawn by Mr. Keuleman and Mr. Smit, and will be coloured. The reptiles and fishes are being engraved by Mr. Mintern. The volume will contain the mammalia, the birds, the reptiles, the fresh-water fish of the Jordan and its affluents, the land and fresh-water molluses, the diurnal butterflies, the Orthoptera, the Arachnidæ, and the flora, comprising at least 1,600 species of phanerogamic plants." The printing of the work is already commenced. Hopes are entertained of bringing it out before the end of the year. This also will be issued independently of the great work of which it forms a part.

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There are a few copies not yet subscribed of the "Survey of Western Palestine." The Committee are very desirous that these should be taken by Public Libraries. Librarians and subscribers are requested to communicate with the Secretary as to the terms on which Libraries can have the whole work.

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The Old and New Testament Maps have been well received. Up to the present date there have been taken by subscribers, at subscribers' price—about 400 each. This is a fair beginning. But it is only a beginning. The Committee have placed all Sunday Schools on the same footing as subscribers, provided they apply to the Secretary at the office.

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The authorised lecturers for the Society are—

(1) The Rev. Henry Geary, Vicar of St. Thomas's, Portman Square. His lectures are on the following subjects:—

The Survey of Western Palestine, as illustrating Bible History.

Palestine East of the Jordan.

The Jerusalem Excavations.

A Restoration of Ancient Jerusalem.

(2) The Rev. James King, Vicar of St. Mary's, Berwick. His subjects are as follows:—

The Survey of Western Palestine.

Jerusalem.

The Hittites.

The Moabite Stone and other monuments.

(3) William Pearson, Esq., Homefield, Langbank, Port Glasgow, Scotland.

The income of the Society, from December 22nd to March 22nd inclusive, from all sources, amounted to £1,123 13s. 3d. The expenditure was as follows:—

	£ s. d.
Maps and Memoirs .. .. ..	576 9 6
Printing account .. .. ..	100 0 0
General management .. .. ..	187 12 0

The amount lying in the Banks on April 2nd was £346 3s. 4d.

The following is the Balance Sheet of Receipts and Expenditure for the year 1882:—

#### RECEIPTS.

1882.

	£ s. d.
Jan. 1.—Balance .. .. ..	112 11 7
Dec. 31.—Subscriptions and Lectures .. .. ..	1,993 4 2
" Maps and Memoirs .. .. ..	1,577 11 11
" Books .. .. ..	97 13 6
" Photographs .. .. ..	14 16 11
	<hr/>
	£3,795 18 1

#### EXPENDITURE.

	£ s. d.
Dec. 31.—Exploration .. .. .. ..	889 4 9
" Maps and Memoirs .. .. .. ..	1,372 16 11
" Salaries and wages, Rent, Advertising, Stationery, Bookbinding, Office and Sundries, Books and Translations .. .. .. ..	644 2 3
" Lecture expenses .. .. .. ..	45 17 0
" Postage .. .. .. ..	88 10 11
" Printing .. .. .. ..	391 12 0
" Balance .. .. .. ..	363 14 3
	<hr/>
	£3,795 18 1

Examined and found correct.

W. MORRISON,  
*Treasurer.*

The liabilities of the Society on January 1st were as follows :—

		£	s.	d.
1. Office and Printing account	..	569	12	4
2. Memoirs .. .. ..	..	669	6	6
3. Maps .. .. ..	..	825	7	2

On the first account a reduction of £200 has been already made, on the second of £407, and on the third of £250. The liabilities on the Map account will of course be cleared by the sale of the Maps.

The assets of the Society are—(1) the amount still due for the Memoirs, viz., £881 5s.: (2) the amount due for Maps, viz., £84 11s.: (3) the copies of the Memoirs which still remain unsubscribed: (4) the copyrights of books, engraved plates, negatives, and photographs: and (5) the office furniture, books, and scientific instruments. To these assets may be added the promised annual subscriptions. Subscribers will understand that the liabilities on the Maps and Memoirs account have nothing to do with the General Fund, and that the debts of the General Fund consist almost entirely of the printing bills.

As regards the general expenditure, the Survey party came home in the spring, so that the exploration expenses were much less than was anticipated. The division of the whole shows the following proportions. It will be observed that the management expenses are pretty nearly a fixed sum, viz., between six and seven hundred pounds a year, whatever else be spent.

Exploration .. .. ..	25·90	per cent.
Maps and Memoirs .. .. ..	39·98	"
Postage .. .. ..	2·57	"
Printing .. .. ..	11·39	"
Management and Lecture expenses	20·16	"

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It is suggested to subscribers that the safest and most convenient manner of paying subscriptions is through a Bank. Many subscribers have adopted this method, which removes the danger of loss or miscarriage, and renders unnecessary the acknowledgment by official receipt and letter.

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Subscribers who do not receive the *Quarterly Statement* regularly, are asked to send a note to the Secretary. Great care is taken to forward each number to all who are entitled to receive it, but changes of address and other causes give rise occasionally to omissions.

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While desiring to give every publicity to proposed identifications and other theories advanced by officers of the Fund and contributors to the pages of the *Quarterly Statement*, the Committee wish it to be distinctly understood that by publishing them in the *Quarterly Statement* they neither sanction nor adopt them.

## THE HOLY SEPULCHRE.

THE most interesting question connected with the topography of Jerusalem is that of the true site of the sepulchre of Joseph of Arimathea, in which Christ was laid, and of the place called Golgotha, or Calvary, where He was crucified, and which was "nigh at hand" to the sepulchre.

The indications of position contained in the Gospels are very slight. The two sites of Golgotha and the sepulchre were near each other (John xix, 42). The place of Crucifixion was "nigh to the city" (John xix, 20); and we learn from the Epistle to the Hebrews that Jesus "suffered without the gate" (Heb. xiii, 12). There is nothing, however, further to show which side of Jerusalem these sites should be placed.

It may reasonably, however, be supposed that Golgotha ("the Skull") was the ordinary place of execution for criminals, which is mentioned in the Mishnah under the name *Beth-has-Sekilah*—the "House of Stoning:" for there is no reason to think that the Roman procurator would have made use of a different place of execution to that established by the Jewish Sanhedrin, although that assembly had been debarred by the Romans from the power of inflicting capital punishment only a little before the date of the Crucifixion. This ancient Jewish place of execution is mentioned as follows in the Mishnah (or Text of the Talmud), about 150 A.D.

"When the judgment was finished they brought him forth to stone him. The place of stoning (*Beth-has-Sekilah*) was outside the Judgment Hall, as it is said, 'Bring him forth that hath cursed' (Levit. xxiv, 14). One stood at the door of the Judgment Hall with a scarf in his hand, and another man rode a horse far off from him, but so that he could see him. If any said, 'I have somewhat to say for his defence,' this one waved his scarf, and the other galoped his horse and stopped the accused; and even if he himself said, 'I have somewhat to tell in my defence,' they brought him back as many as four or five times, only there must be substance in his words. If they found him clear they set him free, but if not they took him forth to stone him. . . . The Place of Stoning was the height of two men. One of the witnesses threw him down on his loins; . . . if he died with that thrust it was finished, but if not the second witness took a stone and cast it on his breast. If he died with that blow the stoning was finished, but if not he was stoned by all Israel" (Sanhed. vi, 1-4).

From this somewhat crabbed description several interesting conclusions have been drawn by commentators. The passage quoted from Leviticus (xxiv, 14), together with the arrangement for communicating by a signal-man and a mounted man between the judges and the condemned, clearly shows that the place of execution was outside the city, and at some distance from the Judgment Hall. It is also understood that a cliff, some 12 feet high, existed at the place of execution, over which the condemned was thrown by the first witness. If he was not killed by the fall, the second witness cast down a stone on him, and the crowd on the cliff, or beneath, stood ready to complete the barbarous execution. It should be noted that

the other methods of execution detailed in the tract *Sanhedrin* are equally barbarous, and also that it appears to have been the custom to hang on a tree, or a cross, the bodies of those who were stoned. "They sunk the beam in the ground, and a cross-beam extended from it, and they bound his hands one over another, and hung him up" (*Sanhed.* vi, 4). The body was, however, removed at sundown according to the negative command (*Deut.* xxi, 23). Thus the "House of Stoning" was also a recognised place of crucifixion.

A tradition is current amongst the Jews of Jerusalem which places this "House of Stoning" at the present knoll, north of the Damascus gate, in which is a cave, known since the fifteenth century as the "Grotto of Jeremiah," with a cliff, the maximum height of which is about 50 feet, facing southwards towards the city. This tradition was first collected by Dr. Chaplin, and I afterwards twice obtained it independently from separate individuals, both being Spanish Jews, and thus belonging to the oldest community of Jews in the city.

This tradition is of course not in accord with that of the Christians, but it has several points in its favour. First, the site is outside ancient Jerusalem, as restored by the latest authorities, the third wall coinciding east of the Damascus gate with the present wall of the city. Second, the existence of an ancient Jewish tomb immediately to the west of the knoll, and of another, possibly Jewish, a little further south, would seem to indicate that the ancient city did not extend so far as to include the vicinity of the knoll : for we learn from the *Talmud* (*Baba Bathra* ii, 9 ; *Tosiphta Baba Bathra* i ; cf. *Yoma* iii, 3) that all tombs were at least 50 cubits outside the walls, saving those of David and Huldah. Third, a Christian tradition, as early as the fifth century, also pointed to the vicinity of this site as the place of the stoning of Stephen, the proto-martyr. Fourth, the vicinity has apparently been always considered unlucky. In the fifteenth century we find Mejr ed Dîn speaking of the tract immediately east of the knoll, under the name *Es Suhrah*, "the desert," and pronouncing it to be accursed and haunted, so that the traveller should not pass it at night. This idea is no doubt connected with that of fixing the Valley of Judgment (or *Jehosaphat*) in the Kedron, which is still called by the Arabs Wâdy Jehenum (the Valley of Hell), an identification which is not supported by any very clear reference in the Bible, although the tradition is ancient and common to Jew, Christian, and Moslem (cf. *Joel* iii, 12). The valley passes not far east of the knoll, and has its head north of it, where the name *Jehosaphat* probably still survives in the Arabic name of the village of *Sha'fât*. The name of the knoll, according to Mejr ed Dîn, was *El Heidemîneh* or *El Heidemîyeh*, and the latter is still the name given to the place by Moslems. It would mean "broken," or "destroyed," perhaps on account of the cliff ; the Moslems, however, consider that it is a corruption of *Heirimîyeh*, in which case it is derived from the traditional Christian name of Jeremiah's Grotto.

The site is one well fitted for a place of public execution. The top of the knoll is 2,550 feet above the sea, or 110 above the top of the Sakhrah rock in the Haram. It commands a view over the city walls to the Temple

enclosure and the Holy Sepulchre Church. A sort of amphitheatre is formed by the gentle slopes on the west ; and the whole population of the city might easily witness from the vicinity anything taking place on the top of the cliff. The knoll is just beside the main north road. It is occupied by a cemetery of Moslem tombs, which existed as early as the fifteenth century at least ; and the modern slaughter-house of Jerusalem is on the north slope. The hill is quite bare, with scanty grass covering the rocky soil, and a few irises and wild flowers growing among the graves. Not a tree or shrub exists on it, though fine olive groves stretch northward from its vicinity ; a few hungry dogs are generally prowling about, and an evil odour from the slaughter-house always offends the senses in climbing the slope. The hillock is rounded on all sides but the south, where the yellow cliff is pierced by two small caves high up in the sides. Some of the Jews appear to consider that the Beth-has-Sekilah was actually *in* one of these caves, which would accord better with the height of the cliff as mentioned in the Mishnah. Visitors of late years have sometimes thought that the hill with its caves resembles a skull with eye-sockets ; but this is perhaps rather a fanciful idea, and the best evidence lies in the Jewish tradition.

The proposal of identifying this hill with Calvary was first published in "Tent Work in Palestine ;" but in 1881 it was found that a Jewish tomb existed on a smaller knoll west of the north road, about 200 yards from the top of the first-mentioned knoll. It was apparently laid bare during building operations in the vicinity, and had not been previously described. This discovery led to the suggestion that the tomb thus standing alone might be the actual sepulchre of Joseph of Arimathea, and the idea excited considerable interest in England at the time.

Having thus noticed the sites to which Jewish tradition seems to point as representing the Holy Sepulchre and the place called Golgotha, we may pause for a moment to notice the Christian tradition as to these sites.

The first writer who speaks of these holy places after the Christian era is the Bordeaux pilgrim, who visited Jersalem in 333 A.D., when Constantine's basilica was being built. He says, "On the left (of a pilgrim going to the Neapolitan or Nablus Gate) is the little hill Golgotha, where the Lord was crucified. Thence about a stone's throw is the cave where His body was placed." He thus apparently describes the present traditional sites in the Holy Sepulchre Church.

The early fathers and pilgrims (as, for instance, St. Willibald in 722 A.D.) also agree that the holy sites were outside Jerusalem in the time of Christ. Willibald says that St. Helena included them within the city walls ; Sœwulf (1103 A.D.) says that Hadrian did so ; but none deny that the wording of the Gospel and Epistle is clear on this point.

According to Eusebius, the Holy Sepulchre was concealed under a mound, on which stood a Temple of Venus, and on removing this the Holy Tomb was discovered quite unexpectedly by Macarius, "beyond all hope" and by "a miracle" ("Vita Const.," iii, 28-30). Constantine's letter to Macarius after this discovery, ordering the building of a basilica, does

not mention the finding of the Cross, said to have been dug up near this site by his mother Helena, in 326 A.D., but the story of this miraculous discovery is noticed by St. Cyril in 347 A.D. The Cross was apparently also seen by Sta Paula in 383 A.D., and the story is repeated by Theodoret in 440 A.D. It appears clear from these accounts that there was no extant tradition as to the site of the sepulchre, but that it was found unexpectedly, and even supposed to have been miraculously indicated to Helena (cf. Robinson, "Later Bib. Res.," pp. 256-8).

It has been argued that the site was known by the existence of the Venus temple, but there is nothing in the account of Eusebius to favour such a view. Considering how uncritical an age the fourth century is known to have been, it is more probable that Macarius, when he found an ancient tomb under the temple on its destruction, jumped to the conclusion that it was the Holy Sepulchre : even if it be not really more probable that an ancient Mithraeum was reconsecrated as a holy Christian site by the Patriarch,—just as St. Clement's at Rome stands over a Mithraeum, and as the cave of the Nativity at Bethlehem is stated by Jerome to have been long used as a Mithraic cavern. Instances innumerable might be quoted in which pagan sites were thus reconsecrated. Pope Gregory, in his famous letter to his clergy (Bede, p. 141), recommends such reconsecration of pagan shrines to Christian uses, as the people would more readily gather in accustomed places of worship. The annual ceremony of the Holy Fire, which is supposed to issue from the Holy Sepulchre, is clearly of pagan origin, and is traced back at least to the ninth century (Bernard the Wise). This fact also lends some support to the idea that the cave may have already existed beneath the temple of Venus, or Ashtoreth, and may have been reconsecrated by Macarius, under the name of the Sepulchre of Christ.

It has also been argued that remains of the ancient city must have existed, and that Constantine and Macarius would not have sought the Holy Sepulchre within its bounds. As regards the first part of this question, Eusebius does speak of such remains ("Theophania," p. 242), and also of New Jerusalem opposite the ruins of the old ("Vita Const.," iii, 33); but nearly three centuries had then elapsed since the great siege, and Jerusalem had been rebuilt by Hadrian, so that considerable archaeological knowledge (such as was certainly not characteristic of the age) would have been required to determine the extent of the ancient town. As regards the second part of the contention, we must never forget that men did not argue in the fourth and fifth centuries in the manner which is distinctive of scientific research in the nineteenth ; they were ready rather to adore the sites indicated by their priests, and to accept the authoritative assertion of patriarchs and preachers with humility. No one can read the homilies of Cyril, the letters of Jerome, or the itineraries of the early pilgrims, without seeing that this was the case. Jerome and Eusebius had curious ideas as to the waters of Bethesda ; the Bordeaux pilgrim found the blood of Zacharias, son of Barachias, still visible on the marble before the altar : he even believed the Transfiguration to have occurred on Olivet, confusing it with the Ascension. Sta Paula found Samaria full of demons, who

"howled like wolves, hissed like serpents, bellowed like bulls," according to Jerome's account ("Peregrinatio S. Paulae"). It was not only Antony of Piacenza who was credulous and superstitious. Traces of ignorance concerning Scripture, and of superstitious beliefs, are found in the earliest and best itineraries of the fourth century. It was an age when men did not very clearly distinguish between Christ and Serapis, when they mixed together the language of the Gospels and the jargon of solar worship. It was an age of belief in sacred footmarks on rocks, and similar wonders, and in no sense of critical or scientific reasoning. The idea that Constantine and Macarius must have taken pains to prove the truth of their new theory, is one which would not be put forward by a student of the fourth century literature as a whole, and it cannot for a moment bear the test of modern research. The notes I have made as to the course of the Tyropœon Valley show clearly that it sinks very rapidly from the narrow saddle near the citadel, and so-called Tower of David; and no military man could for a moment admit that the second wall ran down into this deep valley, instead of occupying the saddle to the west (see "Tent Work in Palestine," vol. i, p. 369). The second wall has not only been shown by Robinson to have started near the Tower of David, but the nature of the ground admits of no other line, and if Josephus is right in saying that it went thence "in a curve" to Antonia (5 Wars, iv, 2) it is quite impossible that the Church of the Holy Sepulchre should have been in the time of Christ outside this wall.

But even if this argument could be shown to be fallacious, there remains the fact that the traditional sites were certainly within Agrippa's wall, which was built only eleven years after the Crucifixion, to defend the suburb which had grown up outside the second wall. Such a suburb would probably have taken in those days more than eleven years to attain the extent necessitating a new line of fortification. In this case, whether within or without, the Holy Sepulchre (as fixed by Constantine) was so close to the second wall that it is impossible to suppose its site not to have been surrounded by houses in the time of Christ, a fact which would be fatal to the authenticity of the site.

The result of ten years of study of this question has been to convince me of the following facts:—

1st. That the tomb of Nicodemus, immediately west of the traditional Holy Sepulchre, is the monument of the Kings of Judah, including the tombs of David and Solomon (see Conder's "Handbook to the Bible," p. 341, 3rd edition), and existed as such at the time of the Crucifixion.

2nd. that a temple of Venus or of Ashtoreth stood in Constantine's time over the supposed Holy Sepulchre. That it was seen by Eusebius, and is the same shown on a coin of Antoninus Pius, which has the legend C.A.C. (Colonia Ælia Capitolina), with figures of Venus and Cupid. That the tomb was either covered up and not known to exist, or else that it was a crypt used for the mysteries which we know to have been connected with the worship of Venus (as, for instance, at Apheka on Lebanon, where the temple of the mourning Venus was destroyed, by Constantine's orders, like that at Jerusalem). Jerome tells us that the Bethlehem crypt, over

which Constantine also built a basilica, was long used as a Mithræum, where the birth of Tammuz was celebrated. It must also be remembered that Constantine built a basilica on the summit of Olivet, where the foot-mark of Christ on the rock is still shown and supposed to have been imprinted at the Ascension ; and this traditional site, which St. Helena visited before the Holy Sepulchre had been found, is not to be reconciled with the statement that Christ ascended near Bethany (Luke xxiv, 50 ; cf. Acts i, 12). It is quite possible that an old temple of Ashtoreth was restored in the second century on the spot now shown in the Holy Sepulchre Church, and reconsecrated to Christian use by Macarius as the Sepulchre of Christ.

3rd. That there is not a single allusion in any Christian writer earlier than Eusebius (fourth century) to the site of the Holy Sepulchre or of Calvary, and that we have a complete break in tradition of three centuries. The Christians left Jerusalem for Pella before the siege of Titus, and we do not know when they came back. Thus, even if they had preserved at first a feeling of veneration for the sepulchre, there is nothing to show that any tradition of its site was handed down by the Apostles to their successors ; and had the site been considered very sacred by the Evangelists, they would probably have been more careful to describe its position. We know, however, that the Jews considered that a man became unclean if he stepped over a hidden tomb (*Yoma*, iii, 3), although the facts that the Holy Sepulchre was a new tomb never as yet used (Luke xxiii, 53), and that the body of Christ was raised again, may have modified this belief in respect to the particular tomb we are considering.

4th. All the evidence as yet collected points clearly to the fact that the present traditional sites were not outside Jerusalem at the date of the Crucifixion, and it is admitted by all writers, ancient and modern, that this objection is fatal to the authenticity of these sites.

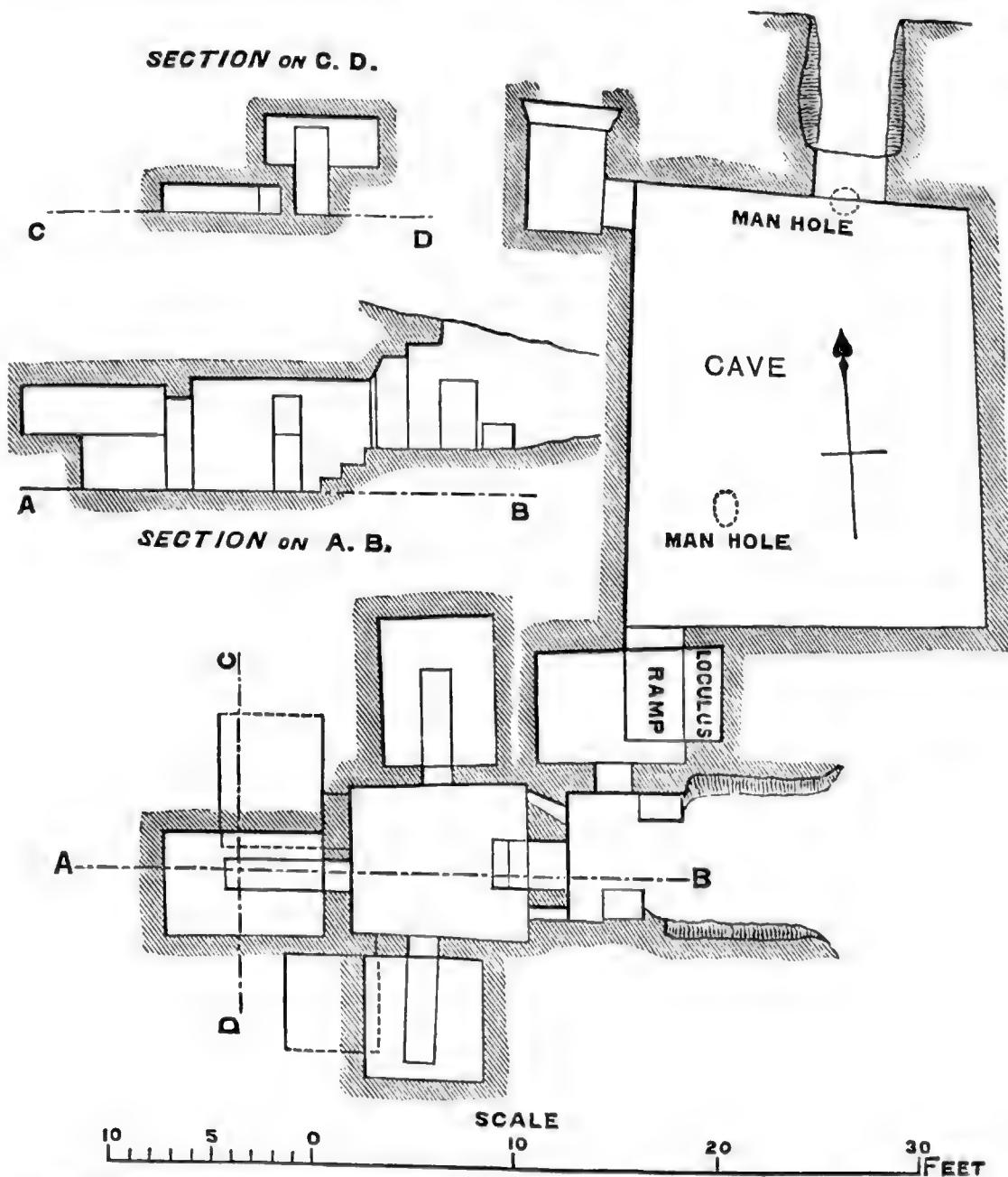
5th. The tradition of the Jews is more reliable, perhaps, than any Byzantine tradition, and the site which is indicated by the Jews appears to agree in a remarkable manner with the Gospel narrative.

6th. That a Jewish tomb exists nigh to the knoll, which Jewish tradition identifies as a place of execution, and even of crucifixion ; and that this sepulchre would seem to have stood by itself in the gardens which we know existed north of Jerusalem (5 Wars, ii, 2), the principal Jewish cemetery of the period being further north in Wâdy el Joz.

7th. That this tomb is of the kind mentioned in the New Testament. Not a sepulchre with *kokim*, or tunnels, but one with a *loculus*, so that angels could have been seen seated at the head and at the feet (John xx, 12), which would be impossible in a *Koka* tomb, and that the *loculus* tomb is shown by dated monuments (as, for instance, the tomb of Helena, Queen of Adiabene) to have been the kind of sepulchre used by the Jews about the time of Christ.

Finally that, although certainty is impossible in face of the very scanty nature of the evidence, the sites now proposed have in their favour better arguments than any others.

The following is the description of the tomb in question sent home in 1881, here reprinted for convenience of reference :—



NEWLY DISCOVERED JEWISH TOMB NEAR THE CITY, 200 YARDS WEST OF JEREMIAH'S GROTTO.

It is cut in the east face of a very curious rock platform, measuring about 70 paces either way—as shown on the Ordnance Survey, about 200 yards west of the grotto. The platform is roughly scarped on all sides, in an apparently artificial manner, and on the west is a higher piece of rock, also with sides rudely scarped. The rest of the space is fairly level, but there seem to be traces of the foundations of a surrounding wall in some low mounds near the edge of the platform. I have long been aware of the existence of a curious cistern in the north-east corner of this scarp. It has a domed roof with a man-hole, and also a door with a passage 10 ft. long and 3 ft. wide, leading out eastwards. The cistern is about 8 paces in

diameter, and three steps lead down from the door to the level of the cistern floor. This excavation seems originally to have been a chamber afterwards converted into a cistern, and there are sockets for the door-hinges and for bolts in the passage entrance.

The ancient tomb is some 30 paces further south, and the entrance is also from the east. The whole is very rudely cut in rock, which is of inferior quality. The doorway is much broken, and there is a loophole or window, 4 ft. wide, either side of the door. The outer court, cut in the rock, is 7 ft. square, and two stones are so placed in this as to give the idea that they may have held in place a rolling-stone before the door. On the right (or north) is a side entrance, leading into a chamber with a single loculus, and thence into a cave, some 8 paces square and 10 ft. high, with a well-mouth in the roof.

The chamber within the tomb entrance is reached by a descent of two steps, and measures 6 ft. by 9 ft. From either side wall, and from the back wall is an entrance 20 ins. wide and about  $5\frac{1}{2}$  ft. high, leading into a side chamber. A passage runs in continuation of each entrance for  $4\frac{1}{2}$  ft., and on each side is a bench about  $2\frac{1}{2}$  ft. wide and  $2\frac{1}{4}$  ft. high. A similar bench occurs at the end, the whole width of each chamber being thus  $5\frac{1}{2}$  ft. ; its length 7 ft. 2 ins., and its height from 5 to 6 ft. Each would contain two bodies lying beside the passage, but there would scarcely be room for three. In addition to these three chambers, there are two excavations on the floor-level, in the further corner of the central chamber. They are about 5 ft. square, with narrow entrances, and were scattered with human bones at the time of my visit.

The discovery of this tomb is of no little importance in connection with Jerusalem topography. If it be compared with the great cemetery at Sheikh (Ibreik Sheet V), and with the monument of Helena at Jerusalem, it will be seen to belong to the later Jewish period—the centuries immediately preceding the Christian era. It is not a Christian tomb, so far as can be judged, for the Christians in Palestine seem mainly to have used the “rock-sunk” tomb. A cemetery of tombs, of the form commonly used by the Crusaders, was found in 1870 near the north-east angle of the Jerusalem city walls, but no Jewish tomb has ever been found before so close to the ramparts of the modern city on the north.

It would be bold to hazard the suggestion that the single Jewish sepulchre thus found is indeed the tomb in the garden, nigh unto the place called Golgotha, which belonged to the rich Joseph of Arimathea ; yet its appearance so near the old place of execution, and so far from the other tombs in the old cemeteries of the city, is extremely remarkable. I am sorry to say that a group of Jewish houses is growing up round the spot. The rock is being blasted for building-stone, and the tomb, unless preserved, may perhaps soon be entirely destroyed. It is now in a disgusting condition of filth, which shows that the oriental Jews have little reverence for the old sepulchres of their ancestors. Perhaps some of our readers might feel willing to redeem this most interesting monument from its present state of desecration, and to purchase and enclose the little plot of rocky

ground in which it stands. Without such preservation the sepulchre is doomed to destruction sooner or later.

The platform of rock in which the tomb is cut seems possibly to have been the base of a group of towers with a scarped foundation.

The distance from the monument of Helena, and the position with respect to the Cotton Grotto, agrees with the description given by Josephus (5 Wars, ii, 2) of the position of the "Women's Towers" (see Conder's "Handbook to the Bible," p. 352). If the third wall actually extended over this line, it is easy to explain why no other tombs of the same period exist so close to the present city. The extension of the fortifications rendered it necessary to remove the cemetery further off, since the Jews did not allow sepulture within the walls. The cisterns may have belonged to the period when the great towers were here erected, and the passage with steps may even have been a postern from the towers.

If we could feel any reasonable certitude that in this single Jewish tomb (dating about the time of Christ) we have recovered the actual sepulchre in which He lay, an easy explanation of the loss of the site is afforded at once; for the construction, some ten years later, of the "Women's Towers" by Agrippa, upon the rock over the tomb, would have caused the monument to be hidden beneath, or within the new buildings; and thus the sepulchre could no longer be visited, and in course of time its existence was forgotten, until the zealous Helena destroyed the Venus Temple on the present site of the Holy Sepulchre Church, and "beyond all hope" (as Eusebius words it) discovered the rock-cut Jewish tomb, which the faithful accepted as the tomb of Christ.

A careful plan of the site, and of the tomb, was made by Lieutenant Mantell, as the alterations in this part of Jerusalem are proceeding so rapidly, that on our next visit rock and tomb may alike have disappeared.

This tomb has since been visited by their Royal Highnesses Prince Edward and Prince George of Wales, and by many travellers, to one of whom we owe an excellent photograph of the entrance. I am also informed by Herr Schick that a slab of stone was found lying in the tomb, when it was excavated, with a cross and Greek inscription. The slab measured 3 feet 11 inches in length by 2 feet 7 inches in breadth. The lettering is  $2\frac{1}{2}$  inches high, the top line being 6 inches from the top of the slab. The inscription runs thus:—

+ ΘΗΚΗ ΔΙΧΦΕΡΟC

This is evidently a funerary tablet of the fifth or sixth century at earliest, and has no necessary connection with the original tomb.

As regards the door of the tomb in question, it is doubtful whether it was intended to be closed by a rolling stone, or by some other means; but it is also doubtful whether the expressions in the Gospel refer to a rolling cylindrical stone door or merely to the temporary closing of a new, and perhaps half finished, tomb by a large rough mass of stone as generally depicted. Sepulchres are often so closed in Palestine at the present time;

and when an old tomb door is thus stopped by stones it generally shows that bodies have recently been buried there by the fellahîn.

The passages in the Gospels referring to the closing of the Holy Sepulchre are as follows :—

“And he rolled a great stone to the door of the sepulchre” (Matt. xxvii, 60).

“Made the sepulchre sure sealing the stone” (Matt. xxvii, 66). “Rolled back the stone from the door” (Matt. xxviii, 2).

“And rolled a stone unto the door of the sepulchre” (Mark xv, 46).

“Who shall roll us away the stone from the door of the sepulchre. And when they looked they saw that the stone was rolled away, for it was very great” (Mark xvi, 3-4).

“And they found the stone rolled away from the sepulchre” (Luke xxiv, 2).

“And seeth the stone taken away” (John xx, 1).

The Greek word *Lithos* used in all these passages is the ordinary word for a stone ; and there is nothing to show that a cylindrical stone door is intended ; so that, although such doors were in use in the time of Christ, it is not necessary that the Holy Sepulchre should be supposed to have been so closed, for there are many other methods which were used by the Jews in closing their tombs.

The plan shows a tomb with two chambers, the main one intended to hold at least six bodies, while the side chamber has only one loculus. We know from the Talmud that it was customary in excavating a Jewish tomb to begin with a chamber for nine bodies (*Mishnah, Baba Bathra, vi, 8*), the sepulchre being hewn as a family vault. Perhaps the single loculus in the side chamber may have been the veritable new tomb, “wherein never man before was laid” (Luke xxiii, 53). The cave opening out of the chamber northwards is probably a late excavation, and has no connection with the original tomb.

Such then is a simple statement of the existing evidence as to the Holy Sepulchre and Calvary. The rude tomb, perhaps unfinished, is hewn in friable rock, and is thus—as is generally the case—less carefully cut than the sepulchres, which were excavated in harder material. It is defiled and ruinous, crumbling and desecrated, but it still stands in a garden by itself. If the result of the discovery, and of what has now been written on the subject, should be the redemption of the site from its present condition of pollution, and its preservation in a simple enclosure—even if the rock be never crowned by any Christian monument, chapel, or cross, the writer of these pages will feel fully rewarded for the time and labour which he has devoted to the question of the true Sepulchre of Christ.

C. R. CONDER, *Capt. R.E.*

24th February, 1883.

## THE EXODUS

I.

GUILDFORD,  
26th February, 1883.

THE interest in the land of Goshen has been steadily increasing of late, and M. Naville's discovery at Tell Mahûta, together with the late war, attracts attention to the topography of the Exodus. Having spent some weeks in this district, visiting Kantara, Ism'aileh, Tell Mahûta, and Tell el Kebîr, I venture to put together the ideas suggested by study on the spot.

There are two points which it is important to keep in view in treating this subject. *First*, the *rate* at which it would have been possible for the Israelites to travel. *Secondly*, the physical changes which must have taken place in the country since the date of the Exodus.

*Rate*.—It seems hardly possible to suppose that the Israelites, with women, children, flocks and herds, could, even when fleeing from their tyrants, have marched faster than the picked infantry of the British army. It is probable also that they did not at first expect to be pursued, having just found the Egyptians so anxious for their departure. It seems, therefore, reasonable to suppose that they did not go more than ten miles a day at most. The modern Arabs, when they move camp, do not generally travel more than about six miles at most in one day. It seems also important to keep clearly in mind the fact that *water* was indispensable to the very existence of the moving host, and we cannot therefore carry them into districts where only salt water could be found. They must have proceeded by caravan routes marked by wells, or else along existing arms of the Nile. The Pelusiac branch was not then silted up, and it appeared clear to me that Wâdy Tumeilât is an old arm of the Nile. Practically we are reduced to two routes: First, that from Sân to Syria viâ Kantara, which is the modern caravan road; and second, that down Wâdy Tumeilât crossing by Ism'aileh. The discoveries and suggestions of Brugsch seem to point to the first, and the late discovery of M. Naville seems to point to the last.

*Physical Features*.—The experience of the Palestine survey rather leads to a rejection of the idea that great changes in fertility of oriental regions have taken place, and it is not to such conjectures that I would now refer, but to the question of the growth of the Nile delta, and the gradual advance of the Egyptian shore line. This is not a matter of conjecture at all, but of actual scientific observation, and it is one which profoundly affects the topography of the land of Goshen. Writers who assume that the shoals and sandpits of the present time existed fifteen centuries before Christ, cannot have read what has been written by engineers about the Nile. Those who wish to study this question in detail should refer to two very able articles in the "Edinburgh Review" for January, 1877, and July,

1879, called "Mediterranean Deltas," and "Brugsch's 'Egypt under the Pharaohs,'" where they will find the history of the Nile growth treated in detail, and the rather hasty theories of Brugsch considered from a practical and scientific point of view, with authorities of the soundest character duly quoted.

It is not only the Nile which has thus for many centuries been adding land to the maritime districts. The Po, the Tiber, the Rhone, the Danube, all increase in length by the growth of deltas which have been measured, and the Euphrates is equally active. In the time of Alexander the Great, the *Shatt el 'Arab* had not been formed, and the mouths of the Tigris and Euphrates were a day's journey apart. The growth of the Euphrates delta goes on at the rate of a mile in seventy years, and Sir H. Rawlinson believes that formerly its rate was a mile in thirty years. Alexander founded the city Charax on the site of the present Mohammerah at a distance of only 2,000 paces from the sea, but that town was fifty miles inland in the time of Juba II, about the Christian era. In Sennacherib's time the sea ran up yet higher, for he crossed the Nar Marratum (cf. Jer. 1, 21), or "salt water streams," into which Tigris and Euphrates flowed separately, when going to Naqitu or Bussorah. The modern Kornah, now 100 miles from the sea, was apparently then a seaport. The town of Uruk, or Mugheir (perhaps Ur of the Chaldees), appears to have been also once a seaport, where the fish-like Oannes appeared from the waters; and in 2000 B.C. Babylon was apparently only 150 miles from the sea, instead of 300 miles.

Turning again to the Nile, there is ample evidence of the growth of the Delta. Herodotus believed (ii, 5) that when Memphis was founded, thirty centuries before the Exodus, all Egypt except the Theban Nome was a marsh, and that none of those parts which afterwards existed below Lake Moeris (near Memphis) were then above water. This seems to agree with the derivation of the name Memphis, which some authorities translate "good harbour," though it is now 120 miles inland. It must be remembered that Sân, or Zoan, eighty miles north-east of Memphis, existed already in the time of the 6th Dynasty, or about ten centuries before Abraham. Thus, instead of a bulging delta, the original Nile mouth at the dawn of history would seem to have been in a deep gulf, which has been ever since filling up with the fertile soil brought down from the Abyssinian highlands.

A few details of the Nile growth may be quoted. It should be noticed that Ptolemy does not show any part of Egypt further north than  $31^{\circ}$  north latitude, which is about the latitude of Zoan. The writer in the "Edinburgh Review" also recognises the artificial straight channels of the Phatmic and Bolbitic mouths far inland, believing that in the time of Herodotus (or eleven centuries after the Exodus) these mouths were only sixty geographical miles north of the bifurcation of the river. Herodotus (ii, 11) says that if the Nile had flowed into the Red Sea nothing could have prevented its being entirely filled up by the mud brought down by the river, and he says also distinctly that the Delta was formerly a bay of

the Mediterranean. He was not aware of the silting up of the Pelusiac mouth, which we now see to be a final result of the Nile mud, and it is probable that another mouth existed near Ism'ailieh, belonging to an arm now represented by Wâdy Tumeilât, which even in Necho's time (600 b.c.) had ceased to exist and was replaced by his canal, still running parallel to the modern Sweet Water Canal on the south side. The Suez isthmus must have been partly formed by the mud brought down this arm ; and the lakes Balah and Timsah, with the Bitter Lakes, are perhaps the survivals of the old arm of the Red Sea, which now extends only to Suez. The Suez Canal, in fact, is only a feeble human effort to counteract the mighty natural action of the great river of Egypt.

From the "Edinburgh Review" (Jan., 1877) we gather the following facts. The littoral current carries the Nile mud eastwards to the Syrian coast, where it assists in forming the sand dunes. There is no scour from Lake Menzaleh or from Port Said, and the dredging alone keeps open the canal mouth, 721,000 cubic yards having been dredged in 1875. The currents depend mainly on the wind, and the prevailing wind blows from the north-west. The Damietta mouth and the projecting coast east of Port Said have, according to Sir H. Rawlinson, the strongest currents, and the coastline was here advancing at the rate of three-quarters of a mile between 1856 and 1875. The shore of the Pelusiac bay is advancing seawards at the rate of thirty-three yards per annum.

The observations of the well-known engineer, Mr. Fowler, in the service of the Khedive, are the most valuable we possess. The solid matter brought down in a year by the Nile is sixty-two millions of tons at least ; the muddy colour of the sea at high Nile can be traced ten leagues from shore, and the soundings taken by Admiral Spratt between El Arish and Abu Kîr bay give depths of only fourteen to twenty fathoms at a distance of twenty miles from shore. The actual encroachment of the shore at Port Said between 1868 and 1873 was at the rate of fifty-six yards per annum, and the gradual historic growth of the Delta is placed at about half that rate. These are but a few of the remarkable observations collected in this paper, but in face of such facts Mr. Greville Chester's statement seems rather unsatisfactory. He admits the growth west of the hillock called *El Gelseh*, but says, "I am convinced by personal observation that such processes are not in operation at the present time to the east of that point." Mr. Chester has evidently not fully appreciated the stupendous character of the action of the Nile and the results of recent surveys. His proposal to stop the action at the precise point which suits his theory rather reminds us of King Canute's chair on the seashore, when we compare it with the surveys and soundings of engineers and Admiralty charts, for Admiral Spratt's chart shows the current to run as far even as Gaza.

The average rate of growth of the shore-line would thus seem to be about a mile in sixty years, which is less than that of Euphrates in early times, and there are no known counteracting causes. The mud must go somewhere, and as the wind is in the north-west for the greater part of

the year, most of the mud is washed along the coast eastwards, and the sea is brown with it leagues from shore. Even if we take the very late date given by Egyptologists for the Exodus (which I for one believe to be founded on the most insufficient evidence) we have an interval of thirty-two centuries between the time of Moses and our own times, which would be enough to give an increase in the shore-line of fifty miles—that is, for the formation of all that part of the Isthmus of Suez between Ism'ailieh and Port Said. No doubt we must make allowances for the deposit of the mud near the apex of the Delta, which would have been greater at first than now, and we must not forget the position and antiquity of Zoan ; but even with these deductions we are left far south of the present shoal which closes Lake Menzaleh. It is impossible to travel through the dismal flats surrounding the Suez Canal, to look on the swamps and shallow waters of Menzaleh, or to examine the friable limestone deposits near Kantara, without recognising the action which has been thus going on for ages. The river pouring down its mud to the sea was met continually by the swell caused by the north-west wind. The sudden arrestation of the current caused a large precipitate of mud. A shoal thus formed at the mouth with an inland lake like Menzaleh or Mariût, and a glance at the map shows us a chain of such Serbonian bogs all along the Delta. As more soil was carried down, these gradually dried, and part of Menzaleh has dried since the canal was made. New shoals formed out at sea, new lakes were gradually enclosed and gradually dried, and all the time the isthmus was growing wider and wider, both at the north end and on the south, until the Tumeilât and Pelusiac branches of the Nile had been entirely choked with their own mud, and the Red Sea had been partly choked by the Nile—a fact which Herodotus did not suspect, as it had happened long before his time.

I have thus given pretty fully the reasons which induced me, in 1879, entirely to reject Dr. Brugsch's theory of the Exodus, and to express my disbelief in the identity of the old Serbonian bog with the lagoon near El Gelseh. No doubt a Serbonian bog existed in Roman times on this part of the coast, and the present lagoon is its successor ; but the shore-line has gone seaward in places at least ten miles since then, and the ancient bog must now be dry land.

The highest land in the isthmus appears to be El Jisr, or the cutting north of Ism'ailieh ; but even here there is no appearance of hard rock, and nothing to show that Africa was not, even within the time of man's habitation of the earth, a great island afterwards joined to Asia by the industrious Nile. As, however, Tell Defenneh appears to be an old Egyptian site, we should probably not be far wrong in supposing that the Mediterranean reached only to Kantara at the time of the Exodus, and that the Pelusiac Nile mouth here existed, and perhaps marshes or lakes represented by the existing lake Balah, connecting the Mediterranean with the head of the Red Sea, which might, without any extravagance, have been supposed to extend at least to the Timsah lake, where perhaps another Nile mouth yet existed, now represented by Wâdy Tumeilât. It was at Kantarah,

apparently, that the Egyptian road to Syria from Zoan crossed the line of the present canal in the time of the 19th Dynasty, and the history of the Nile deposit proves to us that, in writing about the Exodus, we have not to deal with an isthmus 100 miles wide, but with a narrow passage among marshes and lagoons between the ancient shores of the Red Sea and the Mediterranean.

I would repeat that this is not a matter of conjecture or opinion—it is one of scientific observation and historical evidence; and that, consequently, Dr. Brugsch's theory that the Israelites marched along a narrow shoal or strip of shore between the Mediterranean and the lagoon opening at Saranit, together with Mr. G. Chester's view that they went to El Gelseh, which he identifies with Mount Casius, or Canon Scarth's view that the Hebrews camped west of Tell Hir, are all condemned by the fact that these dreary flats and dunes can be shown, by the observations of skilled engineers and surveyors, to have had no existence in the time of Moses.

In the review of Dr. Brugsch's History of Egypt above quoted in the "Edinburgh Review," these facts are dwelt upon, as well as the extraordinary improbability of the theory which makes the Israelites go out of their road, especially to travel along this dangerous boggy strip (for they were bound for Sinai, not for Syria), and which supposes that a mixed multitude with flocks and herds could have travelled forty miles in a single day along a waterless tract, and again which supposes the position of the Israelite camp to be indicated by references to places twenty or thirty miles away from each other.

By the light of such facts as have been collected by engineers, who were not thinking of the Exodus at all, we may now proceed to study the topography of the episode; but in our present state of knowledge concerning ancient Egypt it is not possible to treat the question with that amount of definition which we have attained to in Palestine, through the labours of the Exploration Society. I would, however, here put together a few notes as to Goshen, Rameses, Pithom, Etham, Succoth, Pi-ha-khiroth, Migdol, Baal-Zephon, the Yam Soph, and Marah, which may perhaps be useful to those interested in the subject.<sup>1</sup>

*Goshen*.—The district of Goshen, or the "pastoral land," which Dr. Beke once placed in the Simaitic peninsula, has been defined with tolerable precision (see "Handbook to the Bible," pp. 245–6) as being that part of the Delta which extends south of *Sân*, or Zoan, to the desert of hard sand and gravel south of the Sweet Water Canal. It included the Plain of Zoan (Ps. lxxviii, 11), and the LXX version speaks of Gesen of Arabia, thus apparently identifying Goshen with the Egyptian Arabian Nome, which

<sup>1</sup> I have not here referred to the theories of Josephus and the Septuagint as to the Exodus, in order not to confuse the question; for these later writers seem to understand a march from Heliopolis, near Cairo, which is quite impossible on account of distance. As they lived thirteen or fifteen centuries after Moses, their opinions are not of much importance.

agrees with the meaning of the two words. The capital of the Arabian Nome was called Gosem, and is identified by Brugsch ("Egypt under the Pharaohs," ii, 339) as the later Phacussa, the name of which survives in the ruin of Fakûs, about half way between Sân and Tell el Kebîr.

Colonel Tulloch suggested to me that the district round Kassassin, which is now desert, was once irrigated and fertile. There is no doubt that the fertility of Wâdy Tumeilât is rapidly decreasing, and it [is] probable that the fertile strip here existing along the course of the Sweet Water Canal was once much broader and less sandy. I could, however, see nothing which led to the supposition that the higher ground about Kassassin, Tell el Kebir, and northwards to Salahiyeh, was ever anything but a desert. It consists of hard sand covered with rounded pebbles.

This, however, is a question of degree only, for rich pastures must have existed along the Tumeilât and Pelusiac branches, and the Israelite shepherds no doubt wandered along the valley by which the British army advanced in 1882.

*Rameses.*—This city, which has wandered from Heliopolis, near Cairo, to Tell Mahûta, near Ism'aileh, has apparently been brought to anchor by Brugsch at Sân, or Zoan. Zoan is found to have existed in the time of the 6th Dynasty, but Brugsch finds it to have been called Pi Ramessu by Rameses II. The identification is not by any means complete, because the land of Raamses is mentioned in the Bible long before the Exodus (Gen. xlvi, 11–27), and the identification can hardly be reconciled with M. Naville's identification of Succoth at Tell Mahûta. One of the chief arguments in favour of the date proposed by Egyptologists for the Exodus is founded on the mention of Rameses as the starting-point (Exod. xii, 37, Num. xxxiii, 5), but the earliest mention of the land of Rameses in Genesis destroys much of the force of the argument, for no critic has as yet proposed to make the descent of Jacob into Egypt as late as the time of Miamun, the founder of Pi Ramessu. Mr. Poole has shown that the name Rameses was given to a prince before the time of Rameses I, and the worship of Ra—the midday sun—from whom the name Ra-meses, or "Servant of Ra," is derived, is very ancient in Egypt. It does not, therefore, appear to be quite certain that the Rameses of Exodus is Zoan, although the wording of the Psalm (lxxviii, 11) favours such a view.

*Pithom* (Exod. i, 11), that is, Pi-Tum, the city of Tum, the rising sun, was the second store city built by the Israelites, but it is not mentioned in the account of the Exodus, unless we suppose it to be Etham, which philologically would not be impossible. Herodotus knew of a Patumos which might very well be Pithom, near the canal from Bubastis to the Red Sea—that is, in or near Wâdy Tumeilât (ii, 158), and he calls it the Arabian city. The Antonine Itinerary, in the second century A.D., places Thou, or Thoum, fifty Roman miles from Heliopolis, and forty-eight from Pelusium. Both these notices would agree very fairly with M. Naville's discovery of Pithom at Tell Mahûta, where Linant placed Rameses, and where General Willis's headquarters and the Guards' brigade were posted until shortly before

the Tell el Kebir battle. The time of my visit was not favourable to archaeological purposes, but there were plain indications in the great sand mounds of works more ancient and formidable than those of Arabi's troops, and Necho's canal still exists as a fetid ditch south of the so-called Sweet Water Canal.

*Succoth*.—M. Naville also identifies the same site with Succoth, the Egyptian Thuku. The Nome of Thuku was the eighth, and Pithom was its capital ; it is the later Sethroite nome, the capital of which was Heracleopolis Parva, according to Brugsch (ii, 340). This connection of Pithom and Succoth induces Brugsch to place Pithom north of the modern Kantarah, in order to agree with his theory of the Exodus. If Pithom and Succoth be identical, the latter is the Semitic or Hyksos name, meaning "tents."

*Etham*, according to Brugsch, is to be identified with an Egyptian Khetam, or "fortress," of which there appear to have been several. It may be objected that the Hebrew does not contain the guttural of the Egyptian, and the new site for Succoth will certainly not agree with the theory of Brugseh. The Khetam to which he refers is represented as a fortress astride a river, close to a city called Tabenet, or Dapeneh, which he supposes to be the Daphnai of Herodotus (ii, 30) near Pelusium, which is identified with the present Tell Defenneh, some twenty miles south-east of Zoan. Khetam of Menephtah is, however, mentioned in papyri of the 19th Dynasty as in the "land of Sukot," near Pitom, and "the lakes" of Pitom. It does not appear to be by any means certain that this is the Khetam of the land of Zal (or Zoan) which opened its gates to Rameses Miamun, whence he marched north through the desert to attack the Hittites ; and Brugsch himself tells us that there were several such Khetams.

A good deal of stress has been laid by Brugsch on an Egyptian account of a journey in pursuit of runaway slaves in the time of Seti II ("Egypt under the Pharaohs," ii, 132). The writer starts from Zoan and reaches Thuku on the following day, and on the fourth he arrives at a certain Khetam, or "fortress," lying south of the former, north of which is a Migdol of King Seti. There is a curious parallelism of names, but there is no real identification deducible from this document with respect to the Exodus route, for, as we have seen, there were several Khetams, and there seem to have been also several Migdols, while the word Khetam is not of necessity the Hebrew Etham.

*Migdol*—"the tower"—is, like Succoth, a Semitic name, and the nomenclature of the eastern part of the Delta was in great part Semitic, for it was here that the Semitic Hyksos lived for five centuries, until expelled by the great 18th Dynasty. A Magdolum, twelve miles from Pelusium, on the route leading to the Serapeum, is mentioned in the Antonine Itinerary, which would be a little north of Kantarah. There was a Migdol of Seti, the name of which, according to Brugsch, was Samut, in the land of Hazian, and this he places at Tell Samût, near Kantarah, identifying the land of Hazian with the later Casius, near the Serbonian bog ("Egypt under the Pharaohs," i, 207). Samût is supposed to have been the Egyptian,

and Migdol the Semitic name of this site ; but we may note that Migdol is a name which, in hieroglyphic character, would not easily be distinguished from Miktor.

The Migdol of the Exodus (Exod. xiv, 2) was apparently near the sea (Yam Soph), and the Israelite camp was between the two. I noticed with great interest on the Staff Map of Egypt a Bir Mejdel marked north-east of Ism'aileh. This may perhaps indicate the site of another Migdol, and the vicinity might with advantage be explored.

*Pi-ha-Khiroth*.—This is rendered by Brugsch (ii, 363) "entrance to the gulfs," but the public should be warned that Renouf has devoted a long and learned paper, printed in the "Transactions of the Biblical Archaeological Society" (November 7th, 1882), to this word, and that he has shown pretty conclusively that Dr. Brugsch's word Khiroth does not exist. Thus we fall back on the two earlier derivations given by Gesenius and other authorities, that from the Hebrew meaning "mouth of caverns," and that from the Coptic signifying "place of sedge." It is curious that the name of *Tell el Hir* does not seem to have been connected by Brugsch with *Khiroth*, though it seems radically to represent the Hebrew. In the LXX the word *επαυλεως* ("farms," or "pastures") appears to represent Pi-ha-Khiroth. This would agree very well with the fact that the Israelites encamped at this spot, where they would have found pasture for their cattle. Brugsch makes *Tell el Hir* to be the Hyksos Avaris, but if we take the Pi to be the same Egyptian prefix found in Pi Ramessu and Pithom, there is perhaps no reason why Pi-ha-Khiroth may not be the same as Avaris or Hawar.

*Baal-Zephon* ("Lord of the north," or of the "dark") is naturally to be connected with Typhon, or Tzephon, the dark Semitic enemy of Osiris. On Egyptian monuments, however, Baal-Zapuna is mentioned apparently as identical with Amon, "Lord of the North," and Brugsch suggests an identity with the later Jupiter Casius, and thus with the land of Hazion. The term Baal-Zephon might, on the other hand, be merely rendered "Ridge of the North." It is perhaps worthy of consideration, whether the name Birket Bâlah has any connection with this Semitic Baal, who like Set was no doubt a Hyksos divinity. Brugsch places Baal-Zephon at El Gelseh, but if this mound existed at the time of the Exodus, which could only be determined by a geological examination of the spot, it was probably as a rock in the sea, round which the shoals have since formed. If we were to accept the route proposed by Brugsch, the Israelites must have marched more than *forty miles* in a single day, which is an achievement never attained to by the picked infantry of Germany, over hard roads, and clearly impossible for a mixed multitude in the quicksands of the Gelseh shoal.

*Yam Soph*.—There has been a tendency among all writers, since Brugsch's theory was first published, to suppose that the Israelites crossed some part of the Mediterranean, and not, as previously supposed, over the Red Sea. It is therefore necessary to state clearly what is known as to the Yam Soph, which the Greek translators render Erythrean Sea.

The word *Soph* appears to be the Egyptian *Tuf*, and applies to the "flags" among which the ark of bullrushes was laid (Exod. ii, 2). The bullrushes were papyrus plants, but the *Soph* may have been marine plants, or seaweeds, as pointed out by Canon Tristram, for the word is again used (Jonah ii, 5) in connection with the sea, "the weeds were wrapped about my head," evidently referring to algae. The words *Gome* and *Akhu* are those which properly refer in the Bible to papyri and river vegetation.

The Yam Soph is a term applied in a later book of the Bible (1 Kings ix, 26) to the Gulf of Akabah; but it is of more importance to our present subject to observe that Israel again camps by the Yam Soph (Num. xxxiii, 10) after leaving Elim on their way to Sinai. There is thus no escape possible from the fact that the Gulf of Suez, rather than any part of the Mediterranean, or its lagoons, is the sea intended in the account of the Exodus by the Hebrew Yam Soph, rightly paraphrased by the Greek translators as Erythrean or Red Sea.

A distinction has been drawn by some writers between the "sea" by which the Israelites encamped (Exod. xiv), and the Yam Soph. There is no doubt, however, that it was the Yam Soph in which the Egyptians were drowned, and which the Israelites crossed (Exod. xv, 4); and the distinction is not a very probable one, as the writer would perhaps have been more definite in his wording if he was speaking of two different seas.

As regards the "east wind" (Exod. xiv, 21) which divided the waters, it should also be noted that there is by no means a consensus of opinion as to the translation. The Hebrew root is בְּרֵד, which means "before," of time or place, and the meaning may perhaps be only "contrary" or "opposing." The Greek translation is "a south wind," and the Latin Vulgate has *urens*, or "burning." It is difficult to see how a due east wind, which is not generally a strong wind, can have affected either the Red Sea or the Mediterranean, which would be driven back by north and south winds respectively.

*Marah*.—This was the camp where bitter water was found by Israel, after three days' journey through the wilderness of Shur (Exod. xv, 22, 23), in a waterless tract. If Marah could be fixed we might have another indication of the line of passage. It is therefore worthy of notice that on the Staff Map of Egypt a *Bir Murrah* is marked, east of Ism'aileh, and on the Asiatic side of the canal. The modern name is identical with the Hebrew Marah, "bitter," and such wells are generally very ancient. *Bir Murrah* is about twenty-five miles south of Kantarah, and this would represent quite a maximum three days' march for a mixed multitude who were short of water.

We have thus two sets of identifications to consider, belonging to two routes, one leading to Kantarah, and one to Ism'aileh—the first being that advocated by Brugsch, and the second that noted in the valuable paper by Mr. Poole, in Smith's Bible Dictionary. These sites would be as follows:—

(EXOD. XII, 37 ; XIII, 20 ; XIV, 2.) NORTH ROUTE.			SOUTH ROUTE.
Rameses	....	.... Sân (or Zoan).	—
Pithom		—	Tell Mahûtah.
Succoth		—	Tell Mahûtah.
Etham	....	.... Khetam (Tell De-fenneh).	—
Pi-ha-hiroth	....	Gelseh Hameideh (Brugsch), Tell el Hir? (C.R.C.)	—
Migdol	....	.... Tell Samût (Brugsch).	Bir Mejdel ? (C.R.C.)
Baal-Zephon	....	Gelseh (Brugsch).	—
Yam Soph....	....	Lagoon of Gelseh (Brugsch).	Birket Timsah.
Marah	....	.... Bir Murrah ? (C.R.C.)	Bitter Lakes or 'Ayûn Mûsa.

Such appears to be the present state of our information as to the two routes. I would not venture to express an opinion between authorities like Brugsch and Poole, but one or two notes may be added which, with the three suggestions above given as to Pi-ha-khiroth, Migdol, and Marah, may perhaps be useful in further discussion of the question.

In the first place, the Israelites started from Rameses, and journeyed to Succoth (Exod. xii, 37) apparently in one day. Now if Succoth be really Tell Mahûtah, it seems quite impossible to suppose that the Rameses of this passage is Zoan or Pi-Ramessu, which lies thirty-five miles north of Tell Mahûtah, a distance far too great for a single day's journey of a mixed multitude; the road leading, moreover, for more than half the distance over a waterless desert.

If we accept the south route we must either seek for a second Rameses, perhaps older than the time of Rameses Miamun, or we must consider merely the "land of Raamses" to be intended (Gen. xlvi, 11), a district equivalent to Goshen.

Secondly, it must be confessed that Brugsch's identifications of Etham, Migdol, Pi-ha-hiroth, and Baal-Zephon cannot be considered to be very convincing. They are no doubt possible (save the last), and agree together fairly, giving journeys of ten miles per diem as far as Etham, but afterwards becoming quite out of all possibility in distance.

Thirdly, a great deal hinges on the expression, "turn and encamp before Pi-ha-hiroth" (Exod. xiv, 2). This site cannot have been more than about twenty miles from Succoth, and ten from Etham, and the definition would suggest its close proximity to Baal-Zephon and Migdol, which Brugsch entirely neglects, placing Pi-ha-hiroth fifteen miles from his Migdol, and thirty miles from his Baal Zephon, which would be like defining Tunbridge as between London and Hastings—not a very minute topographical indication. Now the word "turn," though rendered also "turn back" by the Greek translators, appears to come from the root יָשַׁב, which means to

"abide" or "inhabit," and if we were to render it "stay and encamp," the meaning would perhaps be more accurately conveyed. This is, however, a question to be decided by a Hebrew scholar, and is only indicated here as one for examination.

The two routes thus appear each to have arguments in their favour, but the general impression which a study of the ground, and of what has been written, has made upon me, is that the southern route is the most probable. If we could find Etham near Neffisheh, and if we have a survival of the name Migdol in Bir Mejdel, then the route of the Israelites will prove to have been down Wâdy Tumeilât, from the land of Rameses, through Pithom or Succoth.

The *Gîsr*, or "isthmus," north of Ism'aileh, is about fifty feet above sea-level. It seems to be the nucleus of the isthmus, and it may have existed at the time of the Exodus, separating the Mediterranean from the Yam Soph, or "weedy sea," a swamp formed near Ism'aileh, where the Tumeilât branch of the river was perhaps still pouring its mud into the Red Sea. If this isthmus existed we can have no hesitation in accepting the Tumeilât route, and in discarding all ideas of a connection with the Mediterranean. If it did not, lagoons and swamps may have connected the Red Sea and Mediterranean, and the precarious crossing through these might have occurred near Kantarah, in which case it might be just possible to place Pi-ha-hiroth at Tell Hir. It seems, on the whole, more probable that pastures near the Nile mouth not far from Ism'aileh are intended, and that Baal-Zephon is to be sought south-east of Birket Balah.

There are two important notes to be finally considered. The first in Exodus xiii, 17, the second in Exodus xiv, 3. The first states that "God led the people about through the way of the Yam Soph," "God led them not through the way of the land of the Philistines, although that was near." The second states that "Pharaoh will say of the children of Israel, they are entangled in the land, the wilderness hath shut them in." Both these statements appear to me to favour the southern route. The way to the land of the Philistines was, without doubt, that from Zoan to Kantarah, and thence to Gaza, which is still the road to Syria, the only line which can be followed, because there are wells along it, and one which was probably not far from the Mediterranean shore at the time of the Exodus, when Zoan and Daphnai were almost seaports. This route was near to the Israelites in Zoan, it was the direct one to Syria, and a very possible one even if they were going to Sinai.

The second passage came vividly to my mind in advancing to Kassasin. There was wilderness on either hand, and if we could have been driven from the Sweet Water Canal we should indeed have been "entangled in the land," shut in as we were in the desert. The mixed host, if it went out along Wâdy Tumeilât by a branch perhaps of the Nile, were going by the way of the Yam Soph. They had their enemies behind, or perhaps north-west of them, and a forced march from Pi-Ramessu and Salahiyeh would have enabled the Egyptians to seize the head of the gulf, as then existing at Ism'aileh, and to drive the poor fugitives into the sea which was in

front of them ; for the chariots and chariot horses (wrongly rendered horsemen) of Pharaoh could have covered the ground at least twice as fast as the women, children, flocks and herds of Israel.

As we went up the canal we witnessed an Exodus which had something in common with that of Israel. The poor peasants of Port Said and Ism'aileh had been taught to expect every sort of outrage from the ferocious Franjis. Even when they learned the humanity of the English they were still (as they assured me) "only afraid of the *booms*," or cannon shot. The women, with great bundles on their heads, their blue robes tucked up, their babies hung behind them in their veils ; aged men helped by their sons ; the family property on a little donkey ; the weeping children and the hungry-looking men, recalled strangely the idea of that motley host which accompanied the armed men of Israel ; and the slow progress of the departing Fellahin, even though left quite uninjured by our troops, gave a practical example of the impossibility of Brugsch's theory of a forty mile march. With the chariots of Pharaoh dashing over the pebbly desert to the north, or down the valley behind ; with sand dunes covered only with dry tussocks of grass to north and south, with the swampy river-mouth in front and the sea to the right, the yellow hills of the wilderness beyond the sea, the dry wind from the north-east burning their lips, what position could have been humanly more hopeless than that of the children of Israel when Moses "stretched out his hand over the sea ?"

CLAUDE R. CONDER, *Captain R.E.*

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## II.

WHEN one has read Mr. Scarth's pleasing paper (*Quarterly Statement*, October, 1882) on the "Route of the Exodus," has one arrived at any probable conclusion as to that route ? I think not. The suggestion is, doubtless, a novelty—that the course of the Israelites from the encampment near Migdol was *westward*. Naturally, therefore, the question may be asked, Where would they be supposed to be going ? Such a course is neither the "way of the wilderness," nor that road to Palestine which is called "the way of the land of the Philistines." So much light is being thrown gradually on this not unimportant biblical subject, that one almost wishes a sort of standard might be set up—a literary Nilometer—to show how far we had safely got in our investigations from time to time.

As one reads, for instance, Herr Brugsch's essay on "The Exodus and the Egyptian Monuments" (1874), and Mr. Greville Chester's paper (1880), one thinks such antagonists can never come to terms. The addenda and notes to either production show how little space of real difference lies between the two historians.

Now there are very reasonable geographical boundaries to the subject, viz., "Ramses" and "the wilderness of Sin." There are boundaries also in *time* for the passage between these two places,—“and all the congrega-

tion of the children of Israel came into the wilderness of Sin, which is between Elim and Sinai, on the fifteenth day of the second month after their departing out of the land of Egypt" (Exod. xvi, 1).

Much has to be accomplished by the historical inquirer, however, within these boundaries. One asks first, What was the object of their whole journey? God told Moses that He would deliver His people out of the affliction of Egypt, and bring them up into a good land, specially Canaan "The Lowlands"). To Moses, doubting his own power, God promised a sign, viz., that the Israelites should worship Him in Horeb.

To reach Canaan from the Delta of Egypt there seem to have been two great roads in frequent use—though there may have been, and most likely were, caravan routes used at certain seasons of the year. Starting both of them from the royal and central city of Tanis (the modern Sân), the one led by Pithom and Pelusium, and then along the course which Mr. Chester followed, keeping the shore side of Mount Cæsius, to El Arish; the other through the Succoth district to Khetam and Migdol, and then passing (as does the short desert route now) to the south of the Serbonian Lake, bore up north-east to El Arish. These two routes, but especially the latter, must have been well constructed roads. Armies like those of Seti I, setting out, with chariots and all the impedimenta of war, to fight against the Shasu and Kharu warriors, from a country in a proper state of defence, with protecting and corresponding towers and fortresses along its frontiers, would be sure to be able to commence its march along military roads. Ramses II would not neglect in any way the defence of his frontier on the eastern side, or the communication between his fortresses. Besides this, the great roads leading to the country of the Khita, and those leading through the south and right away to the Euphrates, would be regarded as international undertakings, essential to the development of commerce.

We know from the letters of the court scribes, written from Pi-Ramessu (Tanis), that the celebrated treaty of peace between Ramses II and the King of the Khita was regarded as an epoch in the world's history. One may then conclude that Ramses's reign reached the summit of its glory when this great alliance was formed, and that at this time probably the new city of Pi-Ramessu, adjoining the old Zoan (Tanis of the Greeks), or Zor, and looking over those wide plains and lagoons which Mr. Maegregor so well described in "Rob Roy on the Jordan," as far back as 1868, was built. At Zoan (Zor) we stand on very firm ground. This, the ancient capital of the Hyksos kings, had been abandoned by the kings of the 18th Dynasty, the regenerators of Egypt, but had been again exalted to capital rank by the clever Ramses II. Not that he merely resuscitated Zor, or Zoru (the "strong" place, or places), the central post of those many fortifications which give the name Muzur, or Mazor ("fortified") to the whole district, but he built close to it another city—Pi-Ramessu ("the city of Ramses"), and there he established a fresh "cult," that of "Sutekh, or Baal," a deity of the Hyksos kings—whose blood probably ran in his veins.

This new city, with its marvellous temples, the tributary Israelites—

quartered near to it in the land of Goshen—helped to build. Here Moses faced the proud Pharaoh of his day, and hence went up the first notes of that terrible great cry which told of the execution of the judgment of Jehovah.

We know that the Israelites dwelt in the midst of and mingled with the Egyptians, else there had been no need to mark their houses with the blood ; and it is not far-fetched to suppose that there had been for some time, since the day when Moses and Aaron first appealed to them, an excited longing for liberation and freedom amongst the twelve clans. In the treaty (already alluded to) between Ramses and the Khita, there is a curious allusion to runaways and fugitives from Egypt, who might be caught in the Khita country, and their extradition. One may almost imagine that even then there were signs of a coming rising on the part of some distressed tributary people.

Are we obliged to allow only three days after leaving their homes before the Israelites make their encampment at Pihahiroth ? The Bible account does not say so ! Still, as Brugsch has shown, the encampments successively mentioned agree wonderfully well with the stations mentioned in the Report of a certain scribe sent out to retake two fugitive servants, of which he gives us a translation. The writer lived at Pi-Ramessu, and wrote in the reign of Mineptah III (*circ. 1266 b.c.*). The stations mentioned by him are the “fortress or barrier of Thuku” (Sukoth), in one day’s journey, and “Khetam,” after two days. At Khetam the scribe receives news that the fugitives have already passed the “rampart” to the north of the Migdol of King Seti Mineptah. Now I don’t think this “Report” proves anything as to the course taken by the writer on his journey one way or the other, or as to the time spent. What he writes suggests, possibly, that he first took the upper road from the royal city towards Pitom, then turned south and came into the great royal road at one of its stations, “Khetam,” where further and perhaps conclusive news of the fugitives was received. Still it gives us “Etham” and “Migdol,” and it mentions, too, that the report which settled the course of the fugitives came from men who had come from the “sedge city (city of Suf).”

What has been learned about Succoth then ? The ancient divisions of Egypt—beyond that division with which all the royal buildings and tombs make the most unlearned traveller in Egypt so familiar, “Upper” and “Lower”—were retained by the Greek conquerors, and called “nomes,” distinguished from each other by names which were supposed to translate the Egyptian designations into words harmonised to the Greek ear. In the “Sethroitic” nome, the north-easterly division of Lower Egypt, was preserved the Egyptian word which signified “the region of the river mouth,” and was applied to the whole region of the north-east Delta. The capital of this nome Brugsch thinks to have been Pitom (the “Heracleopolis Parva” of the Greeks), which, as though there were more than one, is distinguished as “Pitom in the country of Sukot.” The whole of this district, the eastern border-land, was full of lakes and waters, and these, we may be certain, have changed in form and volume in the intervening centuries, owing to the neglect or destruction

of dykes, canals, &c. It formed the camping ground of various aggressive tribes from the East, and derived its foreign name, "Suko" or "Sukot" (Thuku or Thukot), meaning a "tent" or "tent camp," from this fact. In a letter quoted by Brugsch (vol. i, 247) there is a report of an inferior officer as to the permitting Bedawin of Edom to pass through the fortress, "Khetam of King Mineptah-Hotephmaat" (Mineptah II), situated in the land of Sukot, near the lakes of the city of Pitom, which is situated in the land of Sukot, in order to pasture their flocks, &c., on the lands of Pharaoh. The administration of these eastern marches is clearly set forth in the Egyptian papyri, having its bureau at the royal city Pi-Ramessu ; and the foreign people again were under the control of regularly appointed officers of their own, who were responsible, we may suppose, to the central Government of the country.

Succoth, then, suggests a "region," rather than any one city ; and at some fixed point in that region we may suppose the Israelites to have rallied when Moses sent out his final summons from Pi-Ramessu, and there to have made their first encampment.

For "Etham" we may require some more definite localisation. The children of Israel are to be led to the land of the people called "Canaanites ;" the great royal road, made famous as a road of victory in the annals of the kings of the 19th Dynasty, leads there.

Brugsch, without hesitation, assimilates the Egyptian word Khetam (a "fortress") with the Bible name Etham. Of this Khetam, situated in the province of Zor, there is a representation on the walls of the Great Hall of Seti I at Karnak. The city appears built on both sides of a river (the Pelusiac branch of the Nile probably), and these two portions are connected by a bridge. Hard by is the town "Tabenet," for which the Greeks found a name, Daphnai, perpetuated in the Tel-Defenneh of to-day, with its ancient canal, and the ruined town beyond this canal. Mr. Chester has fully described Tel-Defenneh (Dephneh) and its surroundings : he has pointed out the ancient dyke leading across the artificial lake to the west of the Tel, in the direction of Pi-Ramses, an easy two days' journey, its commanding position on the "edge of the wilderness," and then its propinquity, less than a day's journey, to the spot which he takes to be Migdol.

El-Kantâra, on the canal, is evidently an ancient place, and its name (the "bridge," or "ford") suggests that in this very name we have preserved for us sufficient evidence that here was the highway by which the Egyptians passed on through swamp and intricate country to Syria. A direct line makes it about ten miles from Tel-Dephneh to Kantâra. There are ruins very near Kantâra, which seem to Mr. Chester to be those of Migdol, as probably as those suggested by Brugsch, hard by Tel-es-Samût. But still more does Tel-el-Hîr seem to him to be, from its position commanding the marshes, and from the extent of the ruins (amongst which are the remains of a massive tower), the likely Migdol. Migdol means "tower," and we know, both from the monuments and from the Bible (cf. the proper reading in the margin of Ezek. xxix, 10), that, like as

in the case of "from Dan to Beersheba," "from Migdol to Syene" described popularly the boundaries of Egypt.

Brugsch places at Tel-el-Hir, quoting from Lepsius, Ha-u'ar ("the house of the leg," a name found in other parts of Egypt, and connected with the worship of the leg of "Osiris"), and points out Ha-u'ar's positive identity with Avaris, the great frontier city of the Hyksos kings, where was fought the battle which resulted in the expulsion of the Hyksos kings from Egypt.

Brugsch goes further than this, and argues the probability of this Hau'ar being the "Baal-Zephon" of the Bible—"Sutekh," the tutelary god of the Hyksos, being the same as the Phoenician "Baal." If this be so, we may place, *conjecturally*, Pihahiroth (the word means "entrance to the gulfs") near, opposite to, in the face of, "Baal-Zephon," and find Migdol near to or at El-Kantâra;—or might we not suppose Migdol to be the tower of some outlying work protecting Baal-Zephon?

To-day, as one steams up the canal to Port Said, it is difficult looking westward to distinguish Lake Menzaleh from the Mediterranean, or, as one gets beyond Kantâra, to settle for one's self, looking away towards the north-east, where to place the coast-line of the long-wished-for sea. The brightness of the air and the glare on the sand doubtless add to the confusion of objects. Still I fancy that there must have been always such an intricate spreading out of lagoons and shallows and marshy lands to the east of the Pelusiae branch of the Nile, and just within the boundaries of the shores of the Mediterranean (from which the Tels and Gebels would rise like islands), that the term "sea" might come to have a somewhat indefinite application.

If Baal-Zephon be the same as Ha-u'ar, and if this again agrees with Avaris, I think that much stress should be laid on the inscription in the tomb at El-Kab (Upper Egypt) of the Aahmes family. The inscription, as translated by Brugsch (vol. i, 283), tells us this:—He was a captain of the sailors to the king who founded the 18th Dynasty, and who roused Upper Egypt to war against the aggressive foreigners, the Hyksos, who had so long held Lower Egypt. I have alluded already to the capture of Avaris. Avaris, Takem, and Sherohan are all mentioned as towns besieged and captured. But of the battle at Avaris it is said that they fought *on the lake Pazet-ku*.

But where are the Israelites? It is after their encampment at Etham that they are told to *turn*. But which way? I suppose we may accept the verdict of critics who see in Exodus xiii, 17, 18, the hand of a later compiler annotating Moses's narrative. His explanation then would run thus:—"The march of the Israelites was commenced along the 'way of the land of the Philistines.' They marched in military order. God, however, altered their course, so that they turned out of the royal road, with its stations and fortresses all in due state of defence against incursions of Phœnicians or Arabs, and He led them through the wilderness of the Red Sea." It is this turn, either at or after Migdol is passed, towards Pihahiroth—"the entrance of the gulfs" (which, I take it, was situated on a road leading up

from Memphis to the north-east, and running parallel with the canal, by which Aahmes would advance in his ship against Avaris, the canal of which we have such good evidence in somewhat later times)—which would suggest to Pharaoh their entanglement in the land. The road was an intricate one, owing to the nature of the ground, and beyond this watered country, running down into it, was the desert—that feature of the whole land of Egypt which is most remarkable. What Jehovah did for His people is, I think, described in Exodus xiv, 16. The lost way does not matter; a new road is made through the midst of the sea, the waters are divided, and Israel goes through on dry ground.

If one takes Israel northward from Kantâra and encamps them where Mr. Scarth places them (a distance of over twenty miles), and then does not adopt *his* proposed route, but a route which allows Mount Casius to be Baal-Zephon,—although by Mr. Chester's help we may understand far better the machinery of the miracle,—we are almost forced to turn them back after the destruction of the Egyptians along the same route. As an alternative we may take them past Mount Casius (the causeway along the shore not being broken through as Mr. Chester found it to be), between the Mediterranean and Lake Serbonis, make them double Lake Serbonis, and then, pursuing the line taken now by caravans from Cairo to Gaza, come into such a track as that by which we are led in “Eothen” from Suez to Gaza. Between the going out from Pi-Ramessu to the destruction of the Egyptians, and from that morning till the encampment was made in the wilderness of Sin, there is an abundance of time for marching and counter-marching. One need not put much pressure, then, on one's self in this respect—our difficulties are all topographical. This portion of the journey may be called the “Red Sea portion,” of which the boundaries are conjectural as to localisation.

I do not see why we should regard the narrative in Exodus as continuous. For instance, I think that an entirely fresh paragraph commences after the account of Miriam's song (Exod. xv, 21). There is in the life of the people a new departure from the “great overthrow of Pharaoh.” The corresponding passage (Num. xxxiii, 6–9) is confusing, as also is the designation “wilderness of Shur” (the name of that district through which the Egyptian Hagar passed when she fled from Sarai, and in which is placed the well Beer-lahai-roi). Who is the writer of Numbers xxxiii? Is he not a different person from the author of Exodus xiii, and from the author of Exodus xv? Between the author of Exodus xv, 22, and the author of Numbers xxxiii, 8, there is in common, however, a certain “three days in the wilderness,” and from the narrator in Exodus we gather that they were marked and made memorable by scarcity of water. It is at Marah *after* “the wilderness” that we reach a definite place.

May we not, then, legitimately look to the other terminus of this portion of the journey, and see whether we have any certain points to make *from*? And may we not do well to take as a guide here the lamented Professor Palmer? The object of Moses is now to reach Horeb. The wilderness of Sin was reached, we know, one month after the departure from Ramses?

Professor Palmer gives us ("Desert of the Exodus," vol. I, chap. xiv) the conclusions arrived at by the members of the "Sinai Expedition," 1868-9. I do not know whether he modified his views as to the starting-point of the Israelites; I lay stress only on his itinerary for them from Ayún Músa.

They are moving from the Red Sea: Ayún Músa, with its ancient traditions, is a halting-place (on a straight line it would be about sixty-five miles from El Kantâra). What does one see as one looks northward, with one's back to the blue water of the Gulf of Suez, towards the desert and the desolate lines of Jebel er Ráhah and Et Tih? The "wall-like escarpments" are the *salient features* of the landscape, and we need not wonder at the name "Shur" (in Hebrew signifying "a wall") being given to this track of the desert.

For three days from the "Wells of Moses," the ordinary traveller with baggage has to traverse a waterless region, till he comes to a small clump of dwarf palms, looking in the distance merely like a single bush, which overshadow Ain Hawwárah, a small pool with no water fit to drink. At a distance of two or three hours in a southerly direction you come, however, to the green tamarisks and grand old palm-trees of Wâdy Gharandel, and its perennial stream! Here or hereabouts Elim may be placed, and the present fertility of the spot, in the midst of a district which neglect and the destruction of vegetation tends to render dry and barren, is almost a guarantee for the antiquity of this fertility. The Israelites removed from "Elim" and encamped by the "Red Sea." It is exactly what one does now-a-days! If one chooses the Wâdy Feirán route to Sinai, one crosses from Wâdy Gharandel into the beautiful Wâdy Taiyebeh, and, without over fatigue, on the same day one gets to the sea-shore a little north of Rás Abu Zenímeh, having turned the black headland of Jebel Hammân Far'ún ("Pharaoh's hot bath"). This strip of desert, fringing the coast south of Wâdy Taiyebeh, may reasonably be taken for the "wilderness of Sin."

Making these remarks I don't lose out of sight that the whole narrative would be simpler if from Etham we could bring the Israelites by Lakes Balâh and Timsâh to the Bitter Lakes, and place the passage of the sea somewhere in the neighbourhood of Suez. Only as yet I do not think that we have got satisfactory sites for "Pihahiroth" and "Baal-Zephon," even if there would be no great risk in imagining a "Migdol" in these parts. The starting-points of the Exodus I think we have found, and I think that Professor Palmer has given us firmness of footing for the "wilderness of Sin." Little by little we may come to learn more of the Exodus, giving due weight to every reasonable theory which may be put forth, and not trying to make what *we* think should have been harmonise with what really was.

C. PICKERING CLARKE.

### III.

THE following letter was written and published in the year 1869, on the author's return from a journey to Sinai:—

"I thought that all well-informed persons, who had turned their attention to the subject, were convinced by this time that Cairo had nothing to do with the passage of the Israelites. Avaris was the Zoan of the Pharaohs, and the capital, at least during harvest, of the provinces of Lower Egypt. But every traveller does not go into Lower Egypt, and but few examine the frontier of Goshen, which Robinson long ago identified with the modern province of Shurkeeyeh. Consequently, we still have 'travellers' who try hard to believe that the great event took place at that part of the Red Sea which they saw with their own eyes at Suez. This easy theory is supported by swallowing Mohammedan traditions and names, which are just as worthless in Sinai as data for Scriptural topography, as Popish traditions and names are in Palestine. The 'Valley of the Wandering,' south of Cairo, and the mountain of Attaka, had no more to do with the passage of Israel than Marylebone Lane and Primrose Hill; and if people would but stick to their Bibles instead of servilely following Josephus and the Mohammedans, we should never have heard a word about the Israelites being impeded, 'entangled,' 'shut in,' or turned, by a mountain at all. Even if Holy Scripture had said they were entangled by a mountain, it could not possibly have been Attaka: for they could not have reached it in time, and if they had, it could never have 'entangled' anybody. Your correspondent says he examined it, but the value of his examination is not great, if he did not discover that the mountain does *not* run down sheer into the sea, as it appears to do from Ayun Moosa, but leaves, between its foot and the sea, a level much-used road; a quarter of a mile broad at its narrowest part, and which consequently could not 'entangle' or even hinder any number of fugitives from whichever side they approached it. The idea that they came from Cairo is to be similarly accounted for. 'Travellers' come from Cairo, and *therefore* (for there is no other reason whatever) the Israelites came from Cairo. Zoan, now called San, lies far out of the route, or rut, of such travellers, and *therefore*, in dragoman's logic, could have had nothing to do with it.

"But granting that Zoan was Avaris, and that Abou Kesheyd in the Tumeylatt, was, as Lepsius has shown, the approximate site of Raamses, we have the true starting-point, and the whole narrative, examined on the spot, becomes easily intelligible. Leaving that rendezvous for the Highlands of the Patriarchs, the Israelites struck east by north, or east-north-east by the ordinary way from Egypt to Palestine. On reaching the edge of the desert, near the Serapeion on the Watershed, south of Timsah, they were 'turned' by command, and consequently got on the western shore of that arm of the Red Sea which then ran up near to that point. There they were surrounded by the salt lakes, mirages, marshes, and moving sands, which still 'entangle' any man who wanders in that region. They spread themselves along the shore, weary, disorganised, and confused. There they were overtaken by the angry king. No doubt he had attempted to intercept their north-eastward march by running his chariots into the desert by the Kantâra route, and finding the people had turned southward, he exclaimed that they were entangled by the quicksands,

and following joyfully he came up with them late that evening on the shore.

"At or about fifteen miles north of Suez there runs out towards the desert the only bluff on that whole frontier, Gebel Geneffa, on which the Migdol, or watchtower, would naturally stand to guard the country ; near it, the Bible tells us, was Baal-Zephon, and exactly indicated by these marks near the station of Chalouf en Terraba, as I have no doubt, the great deliverance took place. Not, indeed, as depicted in our nurseries, in a long narrow passage across a sea eight miles wide, as at Ayun Moosa, which would have occupied a week at least, but, as afterwards at Jordan, by the drying up of so many miles of the narrow arm of the sea as would permit the vast and disorderly host to rush across, 'broadside on,' in the short time they had to do it in, 'before the morning.' The other stations now all fall into their proper places. Exactly 'three days' journey' brings them to the only *healed* water, or sweet wells, on this coast of the peninsula, not the bitter puddle of Ain Howâra, which is the 'Marah' of travellers, but the rich fresh-water stores of Abou Soueyra. One whole day's journey more, and Gurundel and Oosait are reached. Almost all allow these to represent Elim. The 'encampment by the sea,' at Abou Zuleema, has never afforded room for controversy. From thence, another difficult and therefore short day's march, round the tide-washed bluff, and they enter the pasturages of 'Sin.' Dophka then followed, i.e., the plain, in the lower part of the Wâdy Feiran, near the sea, where, then as now, 'there was no water.' Alush, also waterless, would be that great plain at the entrance to the granite district of Horeb, where the Amalekite defile begins, with its easily identified hill (not mountain), standing athwart the valley, from which Moses, Aaron, and Hur watched the fight ; and at the end of the defile, the oasis of Rephidim, or Feiran proper, watered by the streams which drain Alayatt and the northern slopes of Serbal. From thence it is just one day's journey from one gate to the other, along the Wâdy el Sheykh ; and after passing the Ootaieyeh gate, they were *in* the Midbar, or 'pasturage' of Sinai, under which, in the plain of Er Raha, they assembled 'on the third day.' It is of no use referring to maps, for not one of them is worth a rush."<sup>1</sup>

"F. GELL."

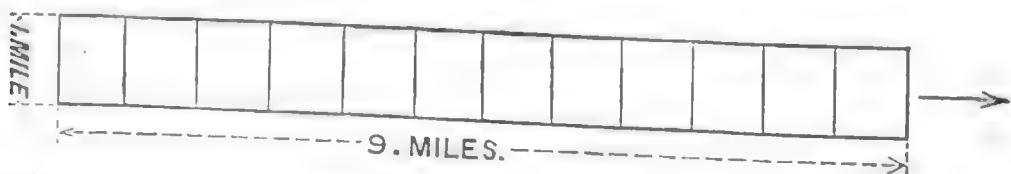
#### IV.

I HAVE read Canon Scarth's article in the *Quarterly Statement* with much interest, and all the more from having recently made the march from Ismailya to Cairo. I have worked out the subject, and find that the march could have been accomplished without difficulty in the way suggested ; of course I do not absolutely accept the theory, as one would not like to do that without a careful examination of the arguments on both sides.

<sup>1</sup> P. S.—March 25th, 1883. This could not be said now ; but it was true fourteen years ago, when this letter was written, that not one map of Sinai existed worth anything. Subsequent investigations have confirmed the view of the route of Israel here indicated.—F. G.

I do not think it would be fair to assume that the tribes marched in a compact mass, and, for the moment, I take the number as given in Exodus, i.e., 600,000, or an average of 50,000 to each tribe.

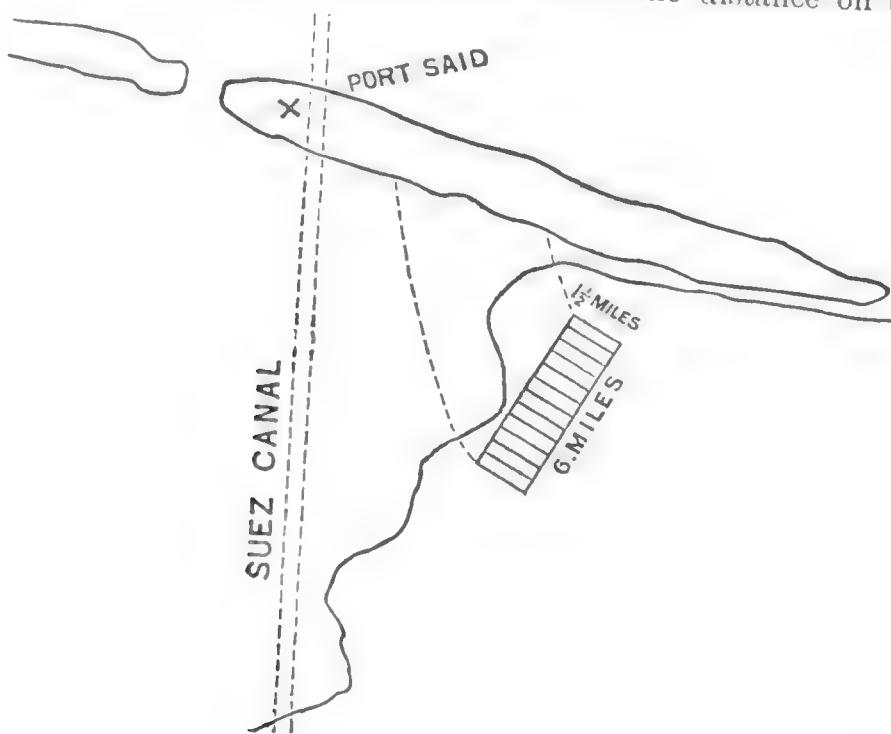
An English regiment of 1,000 men can be *camped* on an area of 320 yards by 150 yards, with their baggage, &c. A similar space is of course ample to allow the same number of men to *march in*, allowing for a considerable amount of straggling, and therefore the whole of the tribes could march or camp on an area of nine miles in length by one mile in width thus :—



This does not seem too large a space to allow, considering the nature of the people, and the certainty that they must have had transport animals with them to carry food and water.

The first day's march, from Zoan to Succoth, would be about fifteen miles ; the second, from Succoth to Etham (a little beyond Kantara), rather more than the same distance.

Here it is assumed that the column turned northwards instead of following what was then, and is to this day, the direct road to Palestine. Pharaoh and the Egyptians had heard of the flight, but were still at least one march in rear. Another day's march brought the tribes to the eastern side of the lake, and here, no doubt, with the rumour that the Egyptians were in pursuit, it is probable that the wanderers would have closed in, and the column, when they halted for the third night, have assumed a deeper and broader form. I have carefully measured the distance on the map



published by the Intelligence Department, and there is plenty of room for the column so formed to encamp, or rather bivouac : for it appears to have been the same night that the alarm came from the rear, and the advance was ordered. Each tribe would then move to its left, and wheel a quarter circle to the right, passing into the dry ground, as the east wind drove away the lake westward. The passage of so large a body of men and animals would doubtless cut up the surface, and it would scarcely come within the category of a miracle if Pharaoh's chariots were unable to cross the bed of the lake and were overwhelmed by the returning water. There would be plenty of room for the whole Israelite force on the bank of sand. There is to my mind one difficulty : when the west wind blew, and the sea returned to its place, I do not see how the people could have regained the road to Etham, unless the sea again partially went to the westward.

If the large scale map published by the Intelligence Department is consulted, the whole thing comes out very plainly. In this map there is a Bir Murra, marked a little to the north-east of the Bitter Lakes, which would agree with the position given to Marah according to Canon Scarth's theory of the Exodus.

Of course, if it is assumed that the numbers given in Exodus are too great, the whole matter would be still simpler.

I have no doubt that there is a vast deal of interesting information to be obtained from a careful exploration of the south shores of Lake Menzaleh, and, so far as I know, it has not up to the present been investigated as it deserves. Perhaps after the Palestine Exploration Fund has completed its survey of the East side of Jordan, it may be able to get funds to extend its researches into the parts of Egypt which are more particularly connected with the history of the Jewish people.

C. M. W.

#### NOTES.

*Kadesh on Orontes.*—I have not yet been able to write on this subject, but would wish to note that the objections raised by my friend Rev. H. G. Tomkins to the new site are based on the supposition that the Lake of Koteineh existed in the time of Rameses II. The lake is artificial, and depends on the great dam, which has all the appearance of Roman work. According to the Talmud the lake was made by a Roman emperor, and I see no reason for doubting this assertion. There is no mention of any lake in the account of the attack on Kadesh itself, nor do the Egyptian pictures appear to give any representation of the lake. They speak only of the river Orontes, and show Kadesh between that river and the affluent on the north—just as Tell Neby Mendeh is situated at the old site of *Kedes*. As regards the name Mendeh, or Mendau (as Robinson calls it), it seems possibly to be derived from the name of the Egyptian deity, Mentu or Mando, the war-god whom Rameses invokes in the epic of Pentaur. I may also note that the name of the Hittites seems to survive in Tell Hetteh, in the valley of the Eleutherus, west of Kadesh on Orontes.

The following points in the *Quarterly* for October, 1882, I have been unable, through duty and illness, to attend to previously.

*Jannes and Jambres*, p. 234.—The occurrence of the name of Moses in documents of the 19th Dynasty in Egypt is not considered by Egyptologists to have any connection with the great lawgiver. Canon Seath will find, by reference to the able paper at the end of Vol. I of the "Speaker's Commentary," that the views of Mr. Dunbar Heath were considered by Egyptological authorities many years ago and were then rejected. The name Moses seems probably to be of Egyptian derivation, signifying "water-child," and the early chapters of Exodus (as well as those in Genesis and in Job referring to Egyptian matters) have been shown to be full of Egyptian words. The name Moshi, in Egyptian papyri, and applying to an island, is probably connected with Horus the rising sun, represented as coming out of the water, rather than with any historic personage. In the same paper the story of Perseus and Andromeda is referred to Egypt. The *Aethiopians* of Herodotus, however, were found in the east as well as in Africa, and the tale is connected with Joppa, where Andromeda is supposed to have been bound. It is considered to be a sun-myth by the school of Max Müller, and Erythras, in this case "the ruddy one," is probably the rising sun. The name red is often given to solar heroes, as, for instance, in the case of the Indian Rohita.

*Asheroth*.—It was not my intention to convey the idea that the Asherah was of stone. It is well known to have been of wood. It is supposed to have been similar to the sacred tree of the Assyrian monuments, the emblem of *Asshur*, and its lineal descendant—though not exactly similar in form—is the maypole. The *Metzeb*, or "pillar," was the stone monument (cf. Levit. xxvi, 1).

*The Garrison*.—I ought to thank my friend, the Rev. W. F. Birch (p. 266), for correcting me on this point. The words, however, are connected, and the Hebrew *Metzeb* becomes *Nusb* in Arabic.

It is quite true, as stated by Mr. Birch, that the word in 1 Sam. xiii, 3 and 4 is נֶצֶב, and it is rendered "pillar" in the Speaker's Commentary. It would, however, have been more satisfactory if Mr. Birch had also stated that the word rendered "garrison" in five other instances in this episode, is as I stated, מִצְבָּה (viz.: in xiii, 23; xiv, 1, 11, 12, 15); the latter word is rendered "pillar" in other passages of the Old Testament.

Mr. Birch does not agree to my view that Jonathan insulted a Philistine sacred *stele* because of the words "and there was a trembling in the host, in the field, and among all the people, the garrison and the spoilers they also trembled, and the earth quaked so it was a very great trembling," (xiv, 15). Mr. Birch says "the vibrations of a pillar cannot here be recorded." It is evident, however, that the writer represents man and nature trembling equally, and if there was an earthquake the Menhir would certainly have rocked. It is, however, possible that the words "all the people: the garrison" should be rendered otherwise הַעֲסֵה מִצְבָּה, meaning "all the people of the pillar"—that is, the defenders of the boundary stele. Thus the only objections raised to the proposed explanation of the word rendered "garrison" seem to be removed.

*Holy oil.*—The authority for the statement in the "Handbook to the Bible" is not stated as clearly as it should be. It is, as said at the beginning of the paragraph, Maimonides commenting on Keritoth. The statement must be taken for what it is worth, but Maimonides is a very careful authority, and his statements are generally based on older authority.

*Rude Stone Monuments.*—I hope to be able to write more fully on this question later. A great deal of light is thrown on the subject by a study of Indian monuments, and of traditions connected with cromlechs and menhirs. There is plenty of evidence of sepulture in dolmens, where covered with cairns; but there is also plenty of sound evidence connecting cromlechs, circles, and menhirs, with sun-worship and nature-worship, and existing customs prove this beyond reasonable doubt. These monuments are of many ages, and are still erected by Arabs and Hindus, as well as by Polynesians, and are found in all parts of the world, including North and South America. Great circles were used as meeting places and council places; heroes were buried in such sacred spots; but, nevertheless, the evidence of sacrifices having been offered, and observations of sunrise having been connected with menhirs, is quite as full and sound as that connected with the sepulchral theory; and the connection in the Bible between early worship and circles, menhirs, and dolmens is sufficiently clear.

*Rock Rimmon.*—I should be much obliged for further information as to the name *Rummâr*, or *Rummân*, collected by Mr. Rawnsley. The care which he took to avoid leading questions, and the assistance of so excellent a guide as the late Mr. Selami, makes the collection of the name valuable. I have not, however, been able to find out where it applies, or what is the proper form of the word, whether with N or R at the end. My guide in 1881, when I re-visited this valley, did not know this name, even though I asked for it, and although he gave me nearly all the other names collected by Mr. Rawnsley and a few besides. The word *Rummân*, meaning "pomegranate," is common in Palestine—indeed is one of the commonest of the descriptive names in the Survey lists.

*Mount Ephron* (*Quarterly*, 1883, p. 52), Mr. Birch seems to identify with Ephrath. It may be noted, however, that the words are radically different, viz.:—**עֲפָרָה** and **אַפְרָן**. It is, therefore, not a mere question of termination.

C. R. C.

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### NOTE ON THE "KEY TO EZEKIEL'S PROPHETIC DIVISIONS."

(See *Map of W. Palestine, Special Edition, illustrating Old Testament.*)

If it be permitted—to an always interested reader of the *Quarterly Statement*, who has geography on the brain, having been instructed therein from his earliest youth up, until the features of the earth and its divisions are as familiar to his mind's eye as A B C, and who has of late years, not once,

but many times, pondered this same impressive subject of Ezekiel's "*Prophetic Divisions*"—to assert an expression of his views differing by 34 minutes of latitude from the apparently authoritative holding of the Palestine Exploration Fund, I venture to write down my impressions.

" $34^{\circ} 34'$  N. latitude" is the northern boundary of the northernmost of Ezekiel's divisions, as recorded in the Old Testament edition of the Map of Western Palestine.

$34^{\circ}$  N. latitude is the result which my own calculations brought out not many weeks ago.

And on these grounds :—

1. "Hamath, Berothah, Sibraim" (Ezek. xlvi 16). "Hamath" is explained, in this and the following verses, to be not the town, but the territory, of that name.

2. "Berothah," or *B'rāt-h*, בְּרוֹתָה, is, beyond possibility of question, *Beirat*—lat.  $33^{\circ} 55'$  N.

3. "Sibraim," or *S'brim*, סִבְרִים, may be *Shebruh* on the west slope of Lebanon, at the entrance of the pass on the north of Jebel Sunnin, situate within two miles of the head waters of the Leontes—lat.  $34^{\circ} 1'$ .

4. There follows upon the mention of these places a specification of their locality, as being "between the border of Damascus and the border of Hamath," *literally*, "between the border of Damascus and *between* the border of Hamath,"—that is, in English, they are *points on the common border* of the districts named. Now the *natural border* between the jurisdictions of Hamath and Damascus practically coincides with the 34th parallel of N. latitude—being the watershed between the basins of the Orontes and Leontes. Moreover, *the Leontes valley is the natural commencement of the valley of the Jordan*.

The beautifully clear and detailed map of Palestine in Keith Johnston's "Shilling Quarto Atlas" is all that is needed to elucidate this point. The following facts will be therein clearly seen. The four main heads of the Leontes rise respectively (from west to east) in  $34^{\circ} 1'$ ,  $34^{\circ} 9'$ ,  $34^{\circ} 10'$ , and  $34^{\circ} 2'$ . The two main heads of the Orontes rise each in  $34^{\circ} 5'$ . And the watershed, starting in the crest of Lebanon in  $34^{\circ} 10'$ , runs south to  $34^{\circ} 2'$ , then north-east to  $34^{\circ} 10'$ , then south-east to  $34^{\circ} 2'$ , or even  $34^{\circ}$ , east of Baalbek. This is a more "natural" boundary than the "northern base of Mount Lebanon" in  $34^{\circ} 34'$ . *The ridge of Lebanon is prolonged north of the 36th parallel, to the mouth of the Orontes.*

5. In verse 15, the border is defined in *general* terms to be "from the great sea, the way of Hethlon, as men go to Zedad"—*literally*, "for going to Zedad." Now Zedad, or *Ts'ddah*, צַדְדָה, is—again beyond possibility of doubt—*Sudud*, on the edge of the Syrian desert, in lat.  $34^{\circ} 21'$ .

It may be noted, in passing, that this is the nearest point mentioned to the  $34^{\circ} 34'$  of the Map of Western Palestine. It is, however, *not* Zedad, but the "way to Zedad," that is given as a point on the border.

6. "Hethlon" I do not claim to identify,<sup>1</sup> nor have I ever seen any identification proposed. But the "way of Hethlon, for going to Zedad,"

<sup>1</sup> See, however, the note appended at the end of this article.

may well be that which lies through the opposite pair of steep and rugged mountain passes in the ranges of Lebanon and Antilebanon,—penetrating the former in  $34^{\circ} 1'$ , the latter—ten miles due east of Baalbek—in *precisely*  $34^{\circ}$  N. latitude. This route is the nearest way to *Sudud* for one starting from *Beirût*.

7. To return to verse 16. The account continues, "Hazar-hatticon, which is by the coast of Hauran." The "village" (*H'ts'r, an enclosed place*) "of *Tikān*"—חַצֵּר הַתִּיכָּן—I consider to be not unreasonably represented by the modern *Kury-e-tein* (*Kury* being the same as קִיר, *Kîr*—from root *Kâr*—meaning *an enclosed place*)—lat.  $34^{\circ} 9'$ .

*Kuryetein* is the *easternmost* place on this latitude, being on the very edge of the desert. Moreover, it is

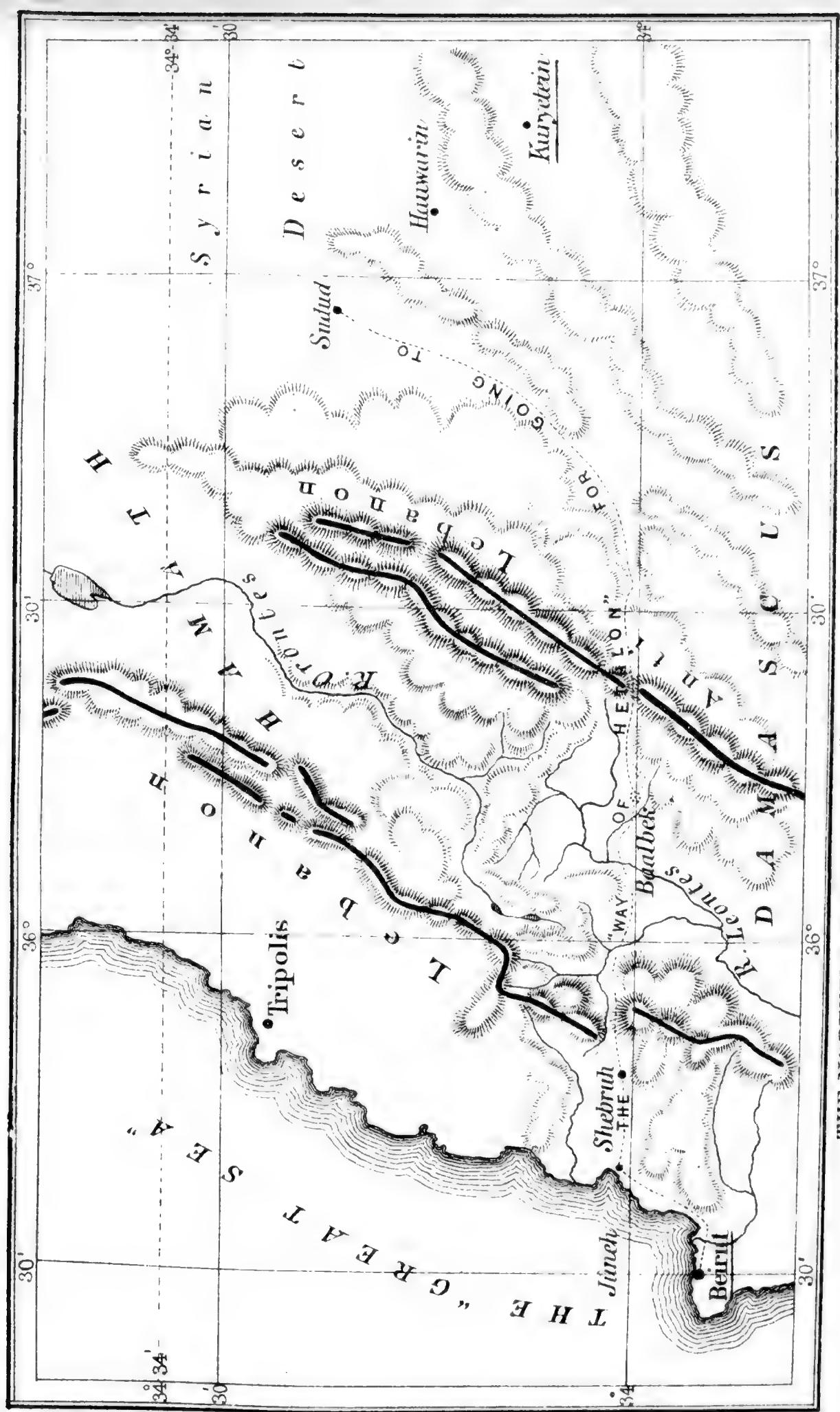
8. "beside *Hauran*." The mention of *Hauran* here, as a place near the northern boundary of the land, excludes the *Jebel Hauran*, the *Bashan* or *Auranitis* of the ancients, in  $32^{\circ} 45'$ . So also does the mention of *Hauran* in verse 18, where it is named as *north of Damascus*. We may, therefore, fairly conclude that, beyond possibility of doubt, the *H'w'r'n*—חוֹרֵן—here intended is the immediate neighbour of *Kuryetein* on the north-west, lying half-way between that place and *Sudud*—to wit, *Hauwarin*, in lat.  $34^{\circ} 15'$ .

9. Lastly, before finally summing up the border, once more, as the common border of Hamath and Damascus, the account specifies the precise point where the boundary line starts "from the great sea." And it seems not altogether unreasonable to identify this point, given as "the village" (Hazar, *H'ts'r*, as above) "of עַיְנָה," or (xlviii, 1) עַיְנָן—"with the village and bay of *Juneh*, *situate within one minute of the 34th parallel*." This identification, in itself perhaps weak, is yet strong when considered in the light of the above cumulative evidence.

Briefly to recapitulate, the evidence is as follows :—

The 34th parallel is a mean between the latitudes of *Beirût* and *Kuryetein*, respectively the most western and most eastern places referred to in the definition of the boundary. The former (just below the parallel), mentioned as being an important place lying very near the border-line; destined, moreover, to retain its name unchanged. The latter (just above the parallel) being that one of the few scattered desert villages which is nearest to the eastern extremity of the border-line. This same 34th parallel, moreover, cuts all the other places mentioned as points on the boundary; while it is the nearest possible conventional line which will at the same time preserve the natural physical divisions of the country. Lastly, if  $34^{\circ} 34'$  had been intended, why should mention have been made of *Beirût*, a place distant more than *forty* miles, when a place fully as important, namely, *Tripolis*, lies within eight miles?

Assuming, therefore—what is certainly the plain inference from a careful consideration of the whole passage, Ezekiel xlviij 13, to xlviii 29—that a line due east and west is intended (and here I am at one with the "Key to Ezekiel's Prophetic Divisions"), it follows that, unless either the validity of the above identifications be disproved, or a case equally strong be made



THE NORTHERN BOUNDARY OF "EZEKIEL'S PROPHETIC DIVISIONS."



out to establish some other result, the boundary line indicated is the 34th parallel of N. latitude.

Some may be tempted to imagine that this is but a trifling point ; but if, as many believe, and as the whole of the great work undertaken by the "Palestine Exploration Fund" seems plainly to indicate, Britain be the Divinely ordained instrument for effecting the restoration of the Jews to the Land of Promise—these investigations may become of paramount value.

#### APPENDED NOTE.

Since writing the above it has occurred to me that it may, after all, be possible to identify *Hethlon*. If there be any reasonableness in the following proposed etymologies, it is more than probable that *Hethlon* is only another name for *Baalbek*. I submit the etymologies for the consideration of Hebrew scholars.

BAAL-BEK.	HETH-LON (הַתְּלִין).
(1) בָּקָע, בָּעֵל = to cleave, break, rend ; whence בָּקָעָה, El Beka'a, "The Valley."	(1) חַתָּה = to break or crush ; by contraction for לֹן, "for Ôn"—Ôn being another designation of the sun-god, Baal.
(2) בָּכָה, בָּעֵל = to weep.	(2) Same, only with the derived meaning for the root חַתָּה = to alarm, be terrified.

In the first case the meaning of the two names will be "The Breach of Baal or Ôn." In the second case, "The Sorrow, or Terror, of Baal, or Ôn." If either of these meanings be established, we have at once the identification of the else unknown "Way of Hethlon;" the track, namely, leading from Beirût and the sea across the steep ranges of Lebanon and Anti-lebanon, with the majestic ruins of Baalbek lying between, to Sudud on the edge of the Syrian desert.

I may further add that what I have lately learnt from a friend, who has himself ridden along the Syrian coast, about the continuity of the Valley of Coele-Syria, with scarcely any perceptible watershed between the Orontes and the Leontes, has in no wise affected, in my own mind, the striking nature of the identification set forth in my article. May I venture to hope that the subject may not be left altogether unnoticed ?

—  
"OXONIAN."

#### SILOAM AND THE POOLS.

THE newly-discovered aqueduct "in connection with the Fountain of the Virgin, which apparently carried water direct to the lower Pool of Siloam" (1882, 4), seems to me to supply a missing link and to clear up an important question. I was of opinion four years ago (1879, 180) that "the waters of Shiloah" had to do with the Virgin's Fountain, and yet could not

have flowed along the Siloam tunnel, as that seemed to me to be undoubtedly the work of Hezekiah. Professor Sayce (1882, 62) fixes the date of the Siloam inscriptions as not later than the time of Ahaz, for the two following reasons :—

- (1) “As Shiloah signifies ‘a conduit,’ the tunnel with the inscription in it must have existed before the time when Isaiah viii 6 was written, and have given its name to the locality.”
- (2) “The fact that the reservoir is called simply ‘the pool’ in the inscription is one I cannot easily get over. If other similar reservoirs existed at the time in Jerusalem, as we know they did in the time of Isaiah, it is difficult to understand how it could be called merely ‘the pool,’ and not ‘the Pool of Shiloah’ or ‘the King’s pool,’ as in Nehemiah iii, 15, and ii, 14.”

On the assumption that the newly-found aqueduct really does lead from the Virgin’s Fountain, we may safely assert that it is more ancient than “the Siloam tunnel,” since it would be unnecessary after the latter was completed. The true explanation, then, seems to be that in the time of Ahaz (and probably long before it) the waters of Shiloah used to flow from the Virgin’s Fount along the lately-discovered aqueduct into a pool (for this very reason called the Pool of Siloam), represented by one of the two present pools. Thus this new discovery shows that point (1) is a fallacious argument. The tunnel need not have existed in the time of Ahaz for the waters to flow along it, as there was already existing another aqueduct along which they might and undoubtedly did flow. It also solves what in my opinion was a very great difficulty, viz., how to apply to a locality near Ain Silwan *all* the various passages where Shiloah, Siloah, and Siloam are mentioned in the Bible and Josephus. I am glad, therefore, to come back to the popular opinion (1878, 187) about Siloam.

Point (2) seems to be answered by 2 Kings xx, 20 : “Hezekiah made a (Heb. *the*) pool and a (Heb. *the*) conduit, and brought water into the city.” This king is emphatically stated to have made *the pool* (and the inscription speaks of *the pool*) and *the conduit*, though both a pool and conduit are named earlier (Isa. vii, 3, 8), in which place the prophet need not speak proleptically.

Without question, then, the canal seems to me to be the work of Hezekiah, and to be referred to in two passages in the Bible, 2 Kings xx, 20, and 2 Chron. xxxii, 30. I anticipate that the wording of the inscription will finally be allowed to confirm the identity of this canal with these works of Hezekiah.

On page 148 (1881) apparently,

מְרֹצִיא (5) represents מְרֹצִיא in 2 Chron. xxxii, 30.

מָתַח (5) represents לְמָתַח in 2 Chron. xxxii, 30.

Thus Captain Conder seems to me to win his point (which I have previously questioned), viz., that Gihon in the latter passage is the Virgin’s Fountain, as it certainly seems to be in 2 Chron. xxxiii, 14. After this I

must concede that Gihon in the third place (1 Kings i, 33, 38) is also the Virgin's Fountain.

I give up at once the identification of Enrogel with the Virgin's Fountain, and of Zoheleth with M. Ganneau's Zahweileh. The "overwhelming evidence" (1878, 187) claimed in their favour is apparently fallacious. Three points only need be mentioned now, viz. :—

- (1) As to the *stone* of Zoheleth. This stone was an *eben*, which term is never applied to a *cliff* like Zahweileh, but to a stone that might be rolled over by human strength.
- (2) As both the terms *ain* and *bor* are applied to the same spring in Genesis xxiv, 16, 20, it is quite allowable to identify Ain-Rogel either with Joab's Well or the spring which at times bursts out of the ground a little to the south of it.
- (3) Since Gihon was the Virgin's Fountain, Enrogel must be looked for elsewhere, as (a) the two names can hardly be applied to the same place in 1 Kings i; and (b) it is incredible, and not consistent with the sacred narrative, that Solomon should be crowned in full view of Adonijah and his supporters, which would be the case if the stone of Zoheleth were identical with the cliff of Zahweileh.

Other interesting points of detail become now more probable if not certain, viz. :—

- (1) The two walls (2 Kings xxv, 4; Isa. xxii, 11) are those reaching one from the upper city and the other from the city of David (on Ophel) to the present upper Pool of Siloam.
- (2) This pool represents "the ditch between the two walls."
- (3) The present lower Pool of Siloam most probably is the King's Pool (Neh. ii, 14) and "the old pool" (Isa. xxii, 11).
- (4) One can hardly avoid identifying "the pool that was made" with (the pool of) the Virgin's Fountain, improbable though it may seem that the wall on the west side of Gihon in the valley (*nachal*) was built so near the eastern base of the Ophel ridge as to come *quite close* to the pool, as appears to be required by **Ty** (A.V. *to*) in Nehemiah iii, 16. Or could the chasm (Jer. Rec., 1871, 251) with water at the bottom have been "the pool that was made?" Or was a pool constructed on the south slope of Ophel, and supplied with water from the aqueduct (Jer. Rec., 105) by its being carried across the Tyropœon?

W. F. BIRCH.

### THE INSCRIPTIONS AT JERÂSH.

SIR,

In the report of the Princes' visit to the Holy Land, in your last *Statement*, there is a copy of a tolerably long inscription found at Jerâsh, No. 4, which is spoken of as "newly found." If, however, you go back to your

*Quarterly Statement* for April, 1872, p. 70, you will find it already in print. I may add that I copied it in 1860. You printed a much longer one, which I discovered at the same time, in your *Quarterly Statement* for September, 1870. What I wish now to point out is that apparently the plinth containing the Princes' inscription, No. 4, has been snapped in two, or partly lost, since I visited the spot in 1860. It is in Homeric lines, and reads better if so printed.

..... ΟΜΟC ΕΙΜΙ ΑΕΩΛΟΦΟΡΟΥ ΘΕΟΔΩΡΟΥ  
 ΜΑΡΤΥΡΟC ΑΘΑΝΑΤ (ΟΥ) ..... ΩΚΕΑΝΟΙΟ  
 ΣΩΜΑ ΓΑΡ ΕΝ ΓΑΙΗ ΨΥΧΗ Δ EΙC ΘΥΡΑΝΩΝ ΕΥΡΥΝ  
 ΑΓΓΕΛΙ ..... ΤΕΛΕΘΕΙ ΚΑ ΓΗΡΑΟΝ ΕΡΜΑ  
 ..... ΑΓΓΕΛΙ ΚΑΙ ΝΑ ΕΠΗΕΙ ΚΑΙ ΕΚΚΟΜΕΝΟΙΟ  
 ..... ΜΑΡΤΥΡΙΟΝ Μ ΔΙΩΤΗC... ΤΙΝΑ ΚΑΝΗΛΑΘΕΝ  
 ΤΑΥΠΕ ....

I will not guarantee the absolute accuracy of my copy, for when I made it I was young at the work ; but it may help to a more accurate reading of the whole.

The inscription No. 2 I also copied in 1860 ; it is a fragment in Homeric lines, and may be printed thus :—

..... ΠΤΗ  
 EN XEONI K[AI] PONTΩ .....  
 ..... ΟΥCA ΧΟΡΕΙΗC  
 ERKOC ..... ΟY ΘY ΘΕΜΕΛΙΩθH

I do not remember the inscription No. 3. Are not any of these inscriptions in de Voguë's work ? There is great interest attached to them : first, as showing the favour with which the Homeric style and metre were regarded for the purpose of public inscription ; and secondly, as showing the high position of honour which must have been given to Christians in early days. The long inscription which you printed from my copy in September, 1870, illustrates still further the marked triumph of Christianity over false religion.

Wycliffe Lodge, Oxford.

R. B. GIRDLESTONE.

## THE BODIES OF THE PATRIARCHS.

### I.

Clericus thinks that “the bodies of the patriarchs, with Jacob—if not those of Abraham, Sarah, Isaac, Rebekah, and Leah—were transferred from Hebron to Shechem :” and, quietly remarking that “the fact is undoubted,” adds, “See Acts vii, 15, 16.” By all means.

A. V.	Acts vii.	'81 Version.
15. So Jacob went down into Egypt, and died, he and our fathers. 16. And were carried over into Sychem, and laid in the sepulchre that Abraham bought for a sum of money of the sons of Emor, the father of Sychem.	15. κατέβη δε Ἱακὼθ εἰς Αἴγυπτον, καὶ ἐτελεύτησεν αὐτὸς καὶ οἱ πατέρες ἡμῶν. 16. καὶ μετεῖθησαν εἰς Συχὲμ, καὶ ἐτέθησαν ἐν τῷ μνήματι ὃ ὀνήσατο Ἀβραὰμ τιμῆς ἀργυρίον παρὰ τῶν οὐών Εμμὸρ τοῦ Συχέμου.	15. And Jacob went down into Egypt, and our fathers ; and they were carried over unto Shechem, and laid <sup>2</sup> in the tomb that Abraham bought for a piece in silver of the sons of Hamor ( <i>m.</i> Emor) in Sechem.

<sup>1</sup> *Vulg.* : Et translati sunt in Síchem et positi sunt in sepulchro.

<sup>2</sup> *Alford tr.* : were carried to Sychem and laid.

Clericus, in saying “transferred from Hebron,” of course implies that the bodies of the twelve patriarchs were first buried there.

Certainly Maepelah at Hebron was the burial place of SARAH (Gen. xxiii) ; of ABRAHAM (Gen. xxv, 9) ; of ISAAC and REBEKAH (Gen. xlix, 31) ; of JACOB (Gen. I, 13) and his wife LEAH (Gen. xlix, 31). But I am aware of no statement or tradition to the effect that the twelve patriarchs were ever buried there.

Indeed the evidence is all the other way. In the above passage St. Stephen says, not that Jacob was buried in Shechem, but that there “our fathers,” *i.e.*, the twelve patriarchs, were buried.

I am not aware of any authority, as regards this particular passage, for rendering μετεῖθησαν “transferred,” as Clericus translates it. There seems good reason for keeping to the A.V. “carried over.” For, in fact, the body of each of the twelve patriarchs had to be “carried over” two geographical divisions. They had to be carried over

- (1) The streams and rivers, especially the Jordan ; and
- (2) The boundary of the lot of each tribe’s inheritance.

*Yaxley, Suffolk,*  
*6th October, 1882.*

W. H. S.

## II.

I THINK that your correspondent “Clericus” will find, on further examination, that his “fact” as to the bodies of the eleven patriarchs having been moved from Hebron to Shechem, is by no means so “undoubted” as he supposes.

There is nothing in Holy Scripture to show that the bodies of the eleven sons of Jacob were ever buried at Hebron, and therefore, nothing to show that they were ever carried from Hebron to Shechem. St. Stephen (Acts vii, 16) does not say that they were carried to Shechem from *Hebron*, but from *Egypt*, in which country they died.

It is true that Josephus (Antt. II, viii, 2, and B. J. IV, ix, 7) is positive that the eleven patriarchs were buried in Hebron; but this will not help "Clericus," for Josephus implies that the bodies were still in Hebron when he was writing. He says he had seen their monuments there, elegantly constructed of the best marble, and he says nothing about the tombs being empty. But the learned Lightfoot (Hor. Hebr. on Acts vii, 16), who is followed by Bishop Wordsworth, suggests that this claim of the later Jews to possess the sepulchres of the eleven patriarchs arose only out of their jealousy of the Samaritans, and they would probably have claimed the tomb of Joseph as well but for the express words of Scripture at Joshua xxiv, 32.

St. Stephen's statement, that the eleven patriarchs were carried from Egypt and buried in Shechem, is supported by the authority of St. Jerome, who distinctly says that the twelve patriarchs (including Joseph) are not buried at Hebron, but at Sychem, where his disciple St. Paula saw their sepulchres (Ep. 86, &c., App. Bp. Wordsworth). It is worth while observing that St. Stephen's words need not be pressed so as to make out that Jacob also was buried at Shechem; the fact that he was buried at Hebron was sufficiently notorious to make further reference to it needless.

Your faithfully,

CHARLES DRUITT.

12th August, 1882.

## SAUL'S JOURNEY.

(1 Sam. ix.)

BY HERR C. SCHICK.

*(From the Zeitschrift of the German Exploration Society.)*

In considering the route by which Saul reached the land of Zuph, my chief endeavour will be to point out the most likely positions of Rachel's grave, Saul's Gibeah, and Samuel's habitation, Rama.

Of the various suppositions about Rama we must speak later on—for the present it is more important that we should discuss the position of Gibeah. It is generally thought that the latter should be sought in Tel-el-ful, and that Saul started from thence, with his servant, and passed by Mount Ephraim, and through (Salisa) Shalisha, Shalim and Benjamin into the land of Zuph. The journey to Rama lasted three days, and the whole context seems to suggest slow travelling on foot rather than the speedy

progress which the Rabbi Schwarz attributes when he describes this journey as extending through the whole of Samaria as far as the Jordan. With regard to Mount Ephraim, the *Wady Hannina* (commencing to the north of Gibeah, and running in a south-westerly direction to Beit Hanina and 'Ain Karim) forms the natural boundary between the mountains of Judah and Mount Ephraim. The land of Shalisha must be sought for to the east of the present Ram, and is most likely identical with Laish, Isaiah 10, 30, which we find mentioned in connection with Rama and Anathoth. The next place through which Saul passed was the land of Shalim, and this must be sought in the neighbourhood of Mickmas and Tayebe, a district now called Bene Salim<sup>1)</sup>. Arrived here Saul must have passed into the land of Benjamin, and continued in a westerly direction. Journeying towards Bethel, we may imagine that the first night would be spent near Surda, or somewhere in that neighbourhood. On the second day, travelling southwards, they would about reach Abu Ghosh. And the third day, as they continued in an easterly direction from Gibeah (and when in the neighbourhood of Beit Nakuba) they would see before them on a hill the present Suba. Robinson has already tried to identify this place with the habitation of Samuel, the ancient *Ramathaim Zophim*. This would therefore be the scene of Saul's meeting with the prophet. The springs of Suba lie below in the valley to the west.

As Saul departed on the following day to return to his home, the route (1 Sam. x, 2) which he was directed to take, was by Rachel's sepulchre in the border of Benjamin at Zelzal, the oak of Tabor, Gibeah Elōhim where the garrison of the Philistines was. We receive, throughout, the impression that this was the natural route, and it does not seem possible that a turning away to the Rachel's grave of tradition was intended, for the latter is in the territory of Juda. Now there is actually an ancient tomb north of the hill on which is the village Kastal (and on the top of the ridge of hills) called Kubbet 'Abd el-Aziz, or sometimes Kubbet *Rachel*. The appearance of the place suggests great age; near some old trees there is a tank cut in the rock, and the remains of houses. If the boundary line was drawn from the spring of Lifta to Abu Ghosh this spot would lie within the border of Benjamin, and near to its limits. The direct way from Suba to Tell-el-ful leads past it, running in a north-easterly direction along the ridge of the mountain as far as Neby Samwil.

North of this tomb, below the gardens of Beit Surik there is a rocky valley, and it is here perhaps that Zelzal should be sought. Ascending again from the valley, we find a little grove which is considered sacred (a wely), and which may be a survival of the tradition of the oak of Tabor, and, possibly, the three men who here crossed Saul's way, were coming from Koloniyyeh and Beit Tulma and were passing over the ridge to go by Neby Samwil to Beitin.

<sup>1)</sup> Any connection between these two names is, according to philological laws, hardly possible.

With regard to Neby Samwil, many things lead us to suppose that it is the ancient Mizpeh. Before Saul reached this hill he passed a post of the Philistines, and from here his way would lead him to the southern side of the hill, where he came across, and joined the company of the young prophets. As the hill was one of the chief seats of learning, it was called the "hill of God," or "Gibeat Elōhīm," and it is identical with Gibeon, the high place at which Solomon sacrificed (1 Kings 3, 4). The town of Gibeon lay at the northern foot of the hill. The tradition that Samuel was buried there is of comparatively modern date, and perhaps arose from its being the burial place of some Christian or Mohammedan saint of the same name.

From there Saul would have had about an hour's journey—by Bet Hnina before reaching his home in Gibeah.

## THE GEORGIAN INSCRIPTION AT JERUSALEM.

DECIPHERED BY PROFESSOR ZAGARELLI OF ST. PETERSBURG.

*(From the Zeitschrift of the German Exploration Society.)*

In September, 1879, in the large Greek convent at Jerusalem, Herr Schick discovered a stone in the corner of a wall on which was a large and very well cut inscription.

Upon making inquiries he was told the characters were in "Korgi," and that they were cut by a people whose kings once had considerable influence in Jerusalem, and whose descendants now lived in the far north on the Caucasus; but no one knew the modern name of this nation. Herr Schick sent me this information, and after a little consideration I concluded that most likely the characters were the ancient Georgian—which used to be called "Khuzuri" (or the priestly), see Fr. Ballhorn "Alphabets," 1880).

Professors Leskien and Euting, of Strasburg, agreed with this view, but neither were able to decipher the characters.

Herr Euting was therefore good enough to forward the copy to Dr. von Dorn in St. Petersburg, by whom it was given to Professor Zagarelli. A long delay occurred owing to Professor Zagarelli's first translation being lost in the post; but after waiting a long while I wrote about it, and he was good enough to send me a copy of his work.

As I neither know the language, nor am well versed in the history of the Georgians, I cannot decide on the historical value of the inscription, but Professor Zagarelli points out that it is of considerable importance to Georgian history, as it proves the long connection of the Georgians with the Holy Land by the fact that at various times they built and supported cloisters. And also (according to Professor Zagarelli) the inscription has a certain importance paleographically as being a specimen of the ancient Georgian ecclesiastical characters. The inscription will doubtless soon be fully explained, as many efforts are being made in various directions to elucidate it.—H. Guthe. Leipzig, 1881.

1. The following is the inscription (with interpolated additional characters) in ecclesiastical Georgian characters<sup>1</sup> :—

ჭირეთა! ქმნდე ჩუკუმონა, ბერე იშვი  
ჩინელ ჭირე და დატე გეგოფეს წერე  
ჭირე უნია ჭირე.

3. Translation. Christ.<sup>2</sup> Holy Nicholas be thou intercessor with Christ for the Queen (=Princess) of Kachetien<sup>3</sup>. Elizabeth, formerly Helena.<sup>4</sup>

### LIST OF RECENT PALESTINE LITERATURE.

By PROFESSOR SOCIN.

(*From the Zeitschrift of the German Palestine Exploration Society.*)

AMONGST works treating of early ethnographical subjects, *Baur* and *Kautsch's* short sketches deserve especial notice.

In *Kugler's* compendium of 'the History of the Crusades, we have a most valuable book, and one that supplies a long felt want. To students it will prove an excellent guide, as it disentangles the contents of a ponderous mass of publications, and gives a very clear account of our present knowledge of the subject. It can have been no easy task to elucidate the policy of a period so bewildering in its confusion of interests and claims. The jealousies of the European powers, the self-interestedness of the pontiffs, the arrogance of the Byzantine court, and the endless dynastic and family conflicts, all combine to make an accurate history of the time an almost impossible task. Herr Kugler, however, has triumphed over all these difficulties, and given us a book which, both for historical and geographical investigations, can hardly be too highly commended. The accompanying map of Syria in the time of the Crusades is especially valuable.

<sup>1</sup> The capitals are the ecclesiastical characters; the rest is filled up in civil Georgian.

<sup>2</sup> All ancient Georgian documents of any importance commence with the letter ჭ ქ (=kh), it signifies "the name of God," or God willing.

<sup>3</sup> The early kingdom of Kachetien is included in the present province of Tiflis.

<sup>4</sup> The Helena here mentioned, is doubtless the daughter of the king of Kachetien, David II, 1604, and sister of Teimuraz I, 1605–1665. She first journeyed (about 1615) to Persia, and later (1624) to Jerusalem, where she founded the cloister of St. Nicholas, in which she became a nun under the name of Elizabeth, or according to some inscriptions, Anastasia. See Brosset's "Histoire de Georgie," ii, and Bullet. "Hist. Philolog.," ii and iii.

In our last review we referred to the *Trench collection* of the historical works of the Crusades. It includes Baldricus, Guibert de Nogent, Albert von Aachen, and the new edition of William of Tyre. *Riant* has made a most useful collection of historical letters relating to the Crusades ; he publishes some which have not before been printed, and points out the want of authenticity in others. The letter of Urban II, for instance, to Alexius, was written by a physician of Verona, in 1574.

A collection of documents relating to the Abbey lands of "Notre Dame de Josaphat," is important, and we must also notice a history of the bishopric of Bethlehem by *Lagéniſſière*, and *Pavie's* book on the part taken by Anjou in the Crusades. The controversy between *Sepp* and *Prutz*, which we before referred to, has led to more remarks and explanations from *Gildemeister*, *Sepp*, and *Röhrich*.

Of works on natural history we must mention *Böttger's* "Reptiles and Amphibia of Palestine," and *Klingräff's* "Vegetation of Palestine ;" the latter is chiefly botanical, but also touches upon the questions of grain cultivation and wood growing.

For meteorological information we have to consult various sources, and we find that the very severe winter of 1879–80 did a great deal of damage. Snow fell even in the valley of the Jordan. The reports from the Temple Observatory, give us the readings of the barometer, the rainfall, &c.

The question of what the future of Palestine is to be, becomes more urgent every year. We have before us many pamphlets on the resources of the land. As an example, we quote a few details from the reports of the German colony in Sarona. "The colony cultivates 800 acres (Ger.) of land of which 200 are vineyards and garden-land. An acre of land yields on an average 6 to 12 ctr. of good wheat, or 10 ctr. of barley. Half of the arable land is thus sown ; on the rest they grow sesame, millet, potatoes, melons, &c. Potatoes planted on the 16th March, would be ripe by the 16th May, and an acre yields about 24 ctr. ; a roll, six pounds, is sold for three piastres. A family could subsist well on forty acres of land. An acre of good land is worth from 10 to 12 napoleons, poor land from 3 to 6. The crop of cucumbers was so prolific that the price fell to the eighth of a piastre for six pounds. The German colony of Jaffa and a Jewish colony are flourishing equally well, but we have bad reports from the German colony at Haifa, their finances being at a low ebb.<sup>1</sup>

The fact that the colonists are more or less dependent on the people of the land, and, even if badly treated, have great difficulty in obtaining justice from the authorities, must always be a stumbling block to the projectors of fresh schemes for colonization. Although (from his experience of thirty years) Herr Schick assures us that European influence has caused considerable progress, we still think that many things would have to be altered before colonists could feel really safe.

<sup>1</sup> I have no book by me with the foreign measures, and only know the German *Malter*, or bushel, as applied to wheat. I conclude the ctr. is about equal to our quarter, of which an English acre yields from five to six.

We have the usual reports from the various missions. Pastor Baarts gives us a description of his efforts in Lebanon, Damascus, and other places. We have also the report of the Zion school. From the Roman Catholic reports, we learn that their mission has forty establishments in the Holy Land, containing no less than 300 Franciscans, and that their schools are attended by 1,440 boys, and 1,122 girls.

Another pamphlet tells us of the 17 mission stations of the Patriarch, and a third paper mentions the principal Maronite priests. The work of the missions is having a very decided effect, not only in the towns, but throughout the whole country. Our readers have doubtless been interested in Klein's papers on the Fellahin; I must also call attention to Herr Goldziher's work on the Mahomedan saints. It is a theme which has a considerable bearing on the question of the Fellahin. One thing should be borne in mind, namely, that we cannot be certain that *all* present conditions were the same in earlier times.

To turn to art history we hear that the colossal statue found near Gaza (and of which various notices have appeared) has with much difficulty been transported to Jaffa, and thence to Constantinople. In reference to the mosaics found near the mount of Olives, I must mention that the name of the place, according to Herr Schick, is in Arabic, Khurbet Kukarki. Sauley has described some other ancient art remains, and the question of the length of the cubit is again agitated.

Steck has written about the routes of the pilgrims, and Grundt gives some details of the Empress Helena's pilgrimage.

We can only touch here on the importance of the large work of Tobler and Molinier, and also that of Röhricht and Meissner calling attention to the first 42 pages of the latter (*Deutsche Pilgerreisen*), which contain a very good description of the pilgrimages after the time of the Crusades. A new edition of the "Saint Voyage de Jerusalem" contains an account of the pilgrim Ogur VIII of Anglure. Dr. Gildemeister has given us the most important journeyings of Kait Bey. Martinvo's publication, contains a phototype of the "Tractatulus totius sacrae historiæ elucidatorius, &c.," which Tobler considers to date from the year 1480 (not the phototype).

The English survey map is by far the most important publication of the year.

Here we may mention *en passant*, about a dozen books of travels in various languages, but of no great importance.

To turn to more scientific works, we have Herr Schultz's article on Jerusalem, for the second addition of Herzog's *Encyclopædia*. In so much that is good we are sorry to find that Herr Schultz tries to place Zion again on the south-west hill. M. Walther has written an "Etude historique" on the topography of ancient Jerusalem, on which subject we have also the valuable articles of Alten and Klaiber. With regard to the temple we are greatly pleased with Smend's treatise, and his commentary on Ezekiel. He suggests that the descriptions of the re-constructed temple, were written from plans which the prophet had before him. Grätz and Loeb have also papers on the second temple.

On the geography of Southern Palestine, many papers have appeared in the "Zeitschrift," amongst which we would call attention to Herr Schick's paper on the Frank mountain. Grätz tries to prove to us that the Nazareth of the New Testament was, according to the Talmud, on the site of the Galilean Bethlehem in the land of Zabulon ; and that Migdal Nunyah of the Talmud corresponds to Magdala. Schultz's articles on Capernaum and Jericho are worthy of notice, as are also those on Hermon and Raima by Rütschi and Mühlau, all in Herzog's Encyclopaedia. A description of the Carmelites reaches us from the Holy Land, written by one of the order.

After the English memoirs, the third part of Guérin's works on Palestine contains quite the best description of Western Palestine extant. Speaking of the other side of Jordan, we have an essay of Klödeus, and an interesting notice by Egli, this latter gives the measurement of the Dead Sea, and the Sea of Tiberias. Lortet has added some valuable information to our knowledge of the Galilean Sea ; it was certainly once connected with the Mediterranean, hence its saltiness. Its fish and mollusca are very remarkable, and amongst them Lortet has discovered a new species. In Guérin's topography of ancient Tyre, there is particular mention of a causeway, which should run from the south-west point of the island, to Ras el-abyd. A French officer has given an account of the seige of Tyre in the "Revue des deux Mondes," and Lortet has discovered a station of the age of stone near Tyre. Zschokke has an article on the Maronites, and Merredaglia a pamphlet on Coele Syria.

Lortet's accounts of his travels, though only extending to Beirut, are charming, and his descriptions of places, and of the various types of people, most accurate and clever.

According to C. von Scherzer's review, it is to be regretted that the Grand Duke Ludwig Salvator's work cannot be obtained by the general public. The theory of the Exodus has been again discussed. Doughty examined the ancient remains of Madain Saleh (Hidyer, near Medina), which resemble those of Petra, and then proceeded to Nej, and Dr. Soetbeer has been seeking the gold mines of Ophir.

THE

# PALESTINE EXPLORATION FUND

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## NOTES AND NEWS.

IT was stated in the April *Quarterly Statement* that the whole question of excavation and exploration in the Turkish Empire was under consideration at the Porte. Nothing definite has yet been published. As it seems useless to wait for the new regulations, which may be delayed a long time, the Committee have decided upon immediately undertaking another part of their original programme.

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An expedition will therefore be attempted for the autumn of this year, in order to effect the Geological Survey of Western Palestine. In October we hope to announce the formation of the party and the programme in full of the proposed work, its objects, the problems which it is sought to solve, and the Biblical aspect of the undertaking, with an estimate of the probable work of the journey.

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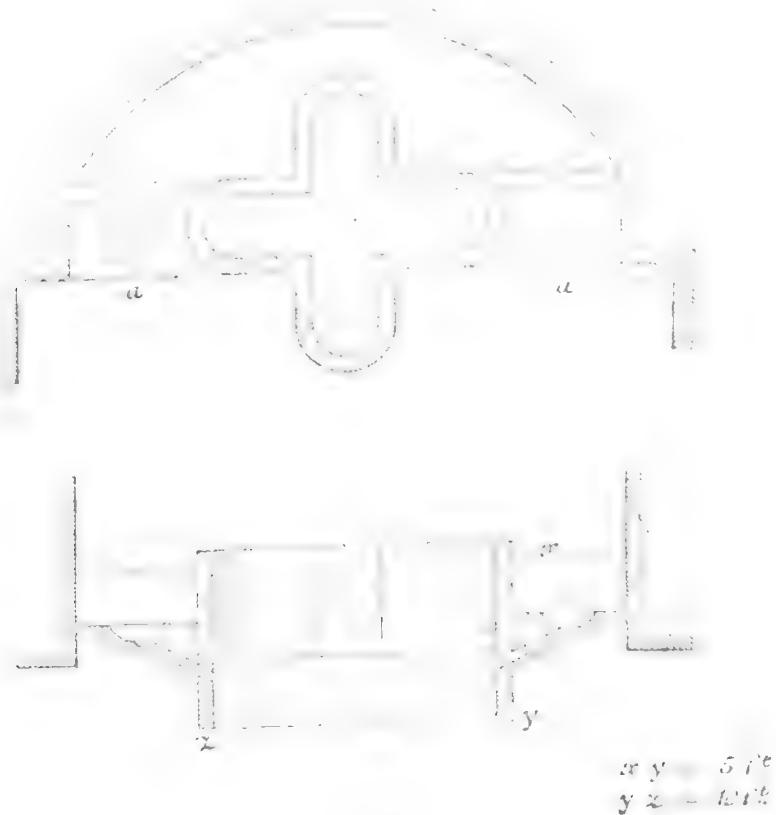
Captain Conder has now returned to the service of the Committee, and is at work upon his Memoirs of the Eastern Expedition. He has also completed his book called "Heth and Moab," which contains a popular account of that expedition. This will be published in October, uniform with "Tent Work in Palestine," but in one volume instead of two.

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Captain Conder writes (22nd June) : "In the account of the siege of Philadelphia, or Rabbath Ammon, by Antiochus the Great, in 218 B.C., as noticed by Polybius (v, 17), it is mentioned that a communication with the water supply outside the citadel had been made by a long subterranean passage, and that the citadel was only reduced when this was discovered to Antiochus by a prisoner. It seems to me that this is explained by a discovery which, as far as I have been able to find, was a new one, and due to the recent Survey. In examining the tombs and caves on the north side of the town I lit upon the entrance to a very large rock-cut reservoir, some 30 feet deep. The cave door was almost on the level of the roof, and a steep slope, with a few rude rock-cut steps, led down. I made a plan and sketch, which will appear in the "Memoirs." Just inside the entrance,

which is about 50 paces (125 ft.) north of the middle tower of the north wall of the citadel, I found a little rock-cut passage, which ran at first east and gradually curved round and trended south. I followed it for 40 feet, and then found it very narrow and choked up. It seemed to me to be intended to enable persons inside the citadel to reach this great reservoir, which must have held rain-water, as it was too high up to be fed from the stream. It is perhaps to this passage and reservoir that the historian alludes."

The accompanying plan and section represent a font and portions of a baptistry recently found at Latrûn, close to Amwâs, 15 miles west by north of Jerusalem. The cruciform shape of the font is rare, but not unknown. Somewhat similar examples will be found in the "Dictionary of Christian Antiquities." The sections have been copied from the original, and hence the dimensions being approximate. A perspective drawing showing the font and accessories more clearly has been asked for, and will, we hope, be given in October.



An account of the various hospices, &c., at Jerusalem, published on p. 160, is taken from Lunez's "Year Book of Jerusalem." It does not include, however, any account of the new Ophthalmic Dispensary recently established by the English Langue of the Order of St. John of Jerusalem. All travellers in Jerusalem will rejoice that such an institution has at last been founded. Under proper management it cannot fail of becoming a great blessing to the country. The Sultan contributed 1,000*l.* towards the hospice. There is a local committee at Jerusalem, consisting of the English Consul, Dr. Chaplin, and Mr. John M. Cook. The surgeon is Mr. J. C. Waddell, M.D. There is already a daily average attendance of from 20 to 150 patients. The committee ask for further

support from those interested in the Holy City. The offices of the Order are at St. John's Gate, Clerkenwell, E.C.

At the last meeting of the Annual Committee Lieut.-Col. Sir Charles Wilson was re-elected, on his return from Egypt, a member of the Executive Committee.

The authorised lecturers for the Society are—

(1) The Rev. Henry Geary, Vicar of St. Thomas's, Portman Square. His lectures are on the following subjects :—  
 The Survey of Western Palestine, as illustrating Bible History.  
 Palestine East of the Jordan.  
 The Jerusalem Excavations.  
 A Restoration of Ancient Jerusalem.

(2) The Rev. James King, Vicar of St. Mary's, Berwick. His subjects are as follows :—  
 The Survey of Western Palestine.  
 Jerusalem.  
 The Hittites.  
 The Moabite Stone and other monuments.

The income of the Society, from March 22nd to June 25th inclusive, amounted in all, including subscriptions, lectures, and payment for maps, measures, and publications to £685 9s. 11d. The expenditure during the same period was as follows :—

	£	s.	d.
Exploration and Survey .. ..	115	0	0
Printing .. .. ..	200	0	0
Maps and Memoirs .. .. ..	337	0	0
Management .. .. ..	178	0	0

It is suggested to subscribers that the safest and most convenient manner of paying subscriptions is through a Bank. Many subscribers have adopted this method, which removes the danger of loss or miscarriage, and renders unnecessary the acknowledgment by official receipt and letter.

Subscribers who do not receive the *Quarterly Statement* regularly, are asked to send a note to the Secretary. Great care is taken to forward each number to all who are entitled to receive it, but changes of address and other causes give rise occasionally to omissions.

While desiring to give every publicity to proposed identifications and other theories advanced by officers of the Fund and contributors to the pages of the *Quarterly Statement*, the Committee wish it to be distinctly understood that by publishing them in the *Quarterly Statement* they neither sanction nor adopt them.

I HAVE recently had occasion to ride through the oak woods which cover the low range of hills that divide the Wâdy el Melek from the Plain of Esdraelon. Notwithstanding the excellent work which has been done by the officers of the Palestine Exploration Fund, it was only to be expected that in so large a forest there should have been objects of interest which have escaped their observation, and which do not appear upon the map—upon which, however, the bye-paths are laid down with such admirable accuracy, as give ample evidence of the care which has been bestowed upon the Survey.

Starting from the village of Semunieh (on the Haifa and Nazareth road), and riding due north, we come, at a distance of about three-quarters of a mile from that village, to a point where the paths bifurcate. On the right are rocky mounds, covered with trees, and where caves and cisterns abound. Here in some instances I found the stone lids still standing untouched on the loculi which had been hewed from the living rock, indicating that the mortal remains within have been undisturbed to the present time. Following the right-hand path, I came, about half-a-mile further on, to a clump of ancient trees, and at their base were six fragments of prostrate columns, some of them 8 and 10 feet long, with their capitals, together with some blocks of stone, on one of which were the traces of an inscription; but they were so filled with lichen as to be undecipherable, and I had no time to scrape them out, or materials with which to make a squeeze. These trees are called by the natives, "Ashasharat el 'Arais, or the "trees of the Bridegroom," a name which would suggest some connection with the early Baal worship. The probability is, that the columns formed part of a temple or shrine dedicated to rites of a kindred nature, which succeeded to it; a little more than half a-mile beyond, I reached a mound covered with ruins, in which were numerous caves and cisterns. The largest cave contained three chambers, with loculi, but there was none of the coloured ornamentation which characterise those of Sheikh Abreik. In some cases the entrances were carved, as were also the lids of the loculi. In one a subterranean passage led to the mouth of a circular pit about 10 feet in diameter, and as many in depth, on the edge of which I found the handle of an ancient vase. The Arabs with me told me that in one of these caves they had found three bottles of red glass, which, as they contained nothing, they had broken. This mound was called Yissy. Between it and the road leading from Ailût to Beit Lahm is another ruin-clad mound called Hamiz, on which, besides the huge blocks of carved stone of which the walls of the ancient town had been composed, were several sarcophagi; a little beyond the mound, and on the side of the Ailût and Beit Lahm road, were five fragments of prostrate columns, and in an inscription on one I distinctly made out the letters IMP. AUR., which would fix the date as that of the reign of the Emperor Aurelian. I also visited a

spot in the depth of the forest between Umm el Amed and Harithiyeh, where "caves and cisterns" is marked in the map, the name of which is Mizrie, and where the ruins seemed sufficiently interesting to repay further investigation. It is also worthy of note that within the last two years, and therefore since the visit of the Palestine Fund Surveyors, excavations have been in progress at Sepphoris, or Sefurieh, beneath the ruined church, which is supposed to mark the site of the dwelling of Joachim and Anna, the parents of the Virgin. These excavations, which are being carried on by the Franciscans, have now been temporarily suspended for want of funds, and the fallen *débris* prevented my entering what I was assured by the priest was a subterranean chapel or crypt, in which were some fragments of handsome columns. Some of those which have been unearthed are now enclosed by the wall forming the new courtyard to the church, which is slowly undergoing a process of restoration; some of these were prostrate, and some standing to a height of 10 or 12 feet. Altogether I counted twelve, with several capitals and pediments. It is not impossible that remains or objects of interest, of a period anterior to the church, which only dates from the fourth century, may be found in the course of the present operations; at all events, the progress of the excavations, when they are renewed, will be worth watching.

HAIFA, 29th May.

LAURENCE OLIPHANT.

## THE MEETING OF THE GENERAL COMMITTEE.

THE Annual Meeting of the General Committee was held on Tuesday, June 19th, at 4 p.m. The chair was taken by Mr. JAMES GLAISHER, F.R.S.

The minutes of the last meeting having been read, the following Report was read by the Secretary.

"MY LORDS AND GENTLEMEN,

"Your Committee, elected at the last General Meeting, held on June 17th, 1882, have, on resigning their office, to render you an account of their administration during the past year.

"The Committee have held nine meetings during the year.

### I.

"On August 1st, 1882, Lieutenant Mantell, one of the officers of the Survey, was recalled to active service in Egypt, and on September 7th Captain Conder was also ordered on service. The Committee were thus deprived of the services of both officers, and the preparation of the Memoirs of the Survey of Eastern Palestine, so far as it has been accomplished, was interrupted. Lieutenant Mantell still remains in Egypt, and although Captain Conder returned home at the end of the war, it was

found necessary for him to take sick leave for a few months. On the expiration of his leave he has rejoined the Society, and is now actively engaged in completing his 'Memoirs.' The portion of the map executed by him has been laid down upon sheets of the same shape as that of the large map of Western Palestine, and also engraved on the reduced scale. Captain Conder has completed a popular work on his last expedition, called 'Heth and Moab,' which is now being printed. It is hoped that the 'Memoirs' will be finished, and the book ready, in the autumn. The form of publication of the former has yet to be decided.

## II.

"The issue of the 'Survey of Western Palestine' has also been retarded by the recent events in Egypt. The departure of Professor Palmer at the end of June, followed by his unfortunate murder in August, kept back the last volume of 'Memoirs,' which we, however, published in April last; and the summoning of Colonel Warren to go out in search of the murderers has delayed the Jerusalem volume, which is now again taken in hand. This volume, with its portfolio of plates and plans, and that of Canon Tristram on the 'Flora and Fauna,' will complete the work, which has been in course of publication such a length of time.

## III.

"The maps to illustrate the Old and New Testaments, consisting of names and tribe boundaries, &c., laid down upon our Survey maps by Mr. Trelawney Saunders, are now published, in addition to the reduced modern map, and the same with the water-basins laid upon it. It is under consideration by the Committee whether the part of Eastern Palestine already surveyed shall not be added to their small maps.

## IV.

"The survey of Eastern Palestine has been necessarily deferred until the Firman has been signed. The Committee see little reason to expect that they will obtain this permission at present. They propose, therefore, to undertake, without further delay, the geological survey which forms a part of the original prospectus of the Society. Practical suggestions have been made by Sir Charles Wilson, and negotiations have been opened with a geologist of great eminence. If the expedition can be arranged it is proposed to send it out in the month of November, and to secure, if possible, four or five mont's of steady work.

## V.

"The following is the Balance Sheet of Receipts and Expenditure for the year 1882:—

## RECEIPTS.

1882.	£	s.	d.
Jan. 1.—Balance brought forward .. .. ..	112	11	7
Dec. 31.—Subscriptions and Lectures.. .. ..	1,993	4	2
" Maps and Memoirs .. .. ..	1,577	11	11
" Books.. .. .. ..	97	13	6
" Photographs .. .. ..	14	16	11
			—
	£3,795	18	1

## EXPENDITURE.

Dec. 31.—Exploration .. .. .. ..	£	s.	d.
" Maps and Memoirs .. .. .. ..	889	4	9
" Salaries and Wages, Rent, Advertising, Stationery, Bookbinding, Office and Sundries, Books and Translations .. .. .. ..	1,372	16	11
" Lecture expenses .. .. .. ..	644	2	3
" Postage.. .. .. .. ..	45	17	3
" Printing .. .. .. ..	88	10	11
" Balance .. .. .. ..	391	12	0
	363	14	0
	£3,795	18	1

Examined and found correct.

W. MORRISON,  
*Treasurer.*

"It will be seen, therefore, that the Committee spent during the year the sum of 3,432*l.*, of which management took 21 per cent.; the maps and 'Memoirs' 40 per cent.; on exploration (there being no party in the field) 27 per cent.; and on printing and posting of the *Quarterly Statement* about 12 per cent.

## VI.

"The Committee have published during the year, besides the third volume of 'Memoirs,' a Report of the Princes' Visit to the Holy Land (Prince Albert Victor and Prince George of Wales), and the Survey and Plan of the Mosque of Hebron, executed by Sir Charles Wilson and Captain Conder, assisted by the Princes. This Report (drawn up by Captain Conder) was presented to the Committee for publication by His Royal Highness the Prince of Wales. A paper has been published on the Climate of Jerusalem, by Dr. Chaplin, embodying the result of twenty-two years' observation, viz., from 1860 to 1881, both inclusive. Papers in the

*Quarterly Statement* have also appeared on the Route of the Exodus, on the Fellahin of Palestine, and on many topographical and archaeological points of interest. To the writers of these papers, especially to Dr. Chaplin, Canon Scarth, the Rev. W. F. Birch, and Captain Conder, the Committee beg to offer their best thanks.

### VII.

"The Committee have had to deplore the loss by death during the past year of three most valuable members of their body. The first of these is Professor Pusey, who never ceased to take the deepest interest in the work, and to support it by donations, as well as by his personal influence. The next is Lord Talbot de Malahide, an active member of the General Committee. The third is Professor Palmer, whose loss to this Society, as well as to Oriental scholarship, is irreparable.

### VIII.

"The Committee have, lastly, to convey their best thanks to their Local Honorary Secretaries, to all their subscribers and donors, and especially the Bishop of Nelson, the Rev. W. MacGregor, Rev. C. Watson, Rev. H. Hall-Houghton, Rev. F. C. Wigram, Rev. M. T. Farrar, Colonel Locock, Rev. A. M. Morrison, Rev. J. Bellamy, the Rev. G. Maxwell, Mrs. Guise, Mr. Ellis, Mr. Burns, 'Omega,' Mrs. Greenwood, Mr. G. S. Gibson, Mr. C. F. Fellows, Lady Smith, Mr. S. H. Officer, Mr. A. W. Jones, Mr. Beaumont, Mr. A. H. Heywood, Mr. Dunkley Paine, Mr. Kent, Miss Wakeham, Miss Bridges, Mr. H. N. Middleton, who have sent donations of 5*l.* and over.

### IX.

"One of the members of the Executive Committee, Major Grover, has resigned, he having been sent to Portsmouth. His place has been taken by Colonel Locock, R.E. Lord Sidmouth has also joined the General Committee."

The Report having been read and discussed, it was proposed by Lord SIDMOUTH, and seconded by Mr. HENRY MAUDSLAY, that it be received and adopted.

This was carried unanimously.

It was then proposed by Dr. WRIGHT, and seconded by Dr. Löwry, and carried unanimously, that the following gentlemen be invited to join the General Committee:—

- Rev. J. N. Dalton.
- Mr. Donald MacDonald.
- Sir Edmund Lechmere, Bart.
- Rev. Canon Scarth.
- Professor Robertson Smith.
- Lieut.-Colonel Stodart, R.E., Director of the Ordnance Survey.

It was then proposed by the CHAIRMAN, and seconded by Dr. GINSBURG, that Lieut.-Colonel SIR CHARLES WILSON, K.C.M.G., R.E., D.C.L., F.R.S., should be invited to rejoin the Executive Committee.

A vote of thanks to the CHAIRMAN completed the business of the Committee.

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### CURIOUS NAMES IN GALILEE.

THE study given to the nomenclature of the Survey has probably by this time almost exhausted the identifications which can be made from it, though from time to time a new and unexpected light may be thrown on Biblical topography by the map. Thus, for instance, the unknown Meroz (Judges v, 23) might perhaps be recognised in the 'Ayûn er Roz close to Kedesh of Issachar, south of Lejjûn (Sheet VIII, Mk), or at 'Ain er Roz (Mj), north of Lejjûn. And, again, Bethshemesh of Naphtali (Josh. xix, 38) is possibly the ruin Shemsûn, east of Tabor (Sheet VI, Qr); while Sheikh Kâsim (Sheet IX, Qj) is a not impossible site for Shahazimah (Josh. xix, 22).

It is, however, in the present paper proposed to glance at various names which, though not directly connected with Biblical topography, are yet perhaps indicative of the ancient condition of the country, and especially at those in the northern sheets of the map, of which five (Sheets I-IV and VI) were surveyed under Lieutenant Kitchener's direction, and the nomenclature translated by the late Professor Palmer, some of whose valuable notes are very suggestive to a student of Arab nomenclature.

Take, for instance (Sheet I, Ne), 'Ain Ib'al, "the Spring of Baal," a village in the Tyrian hills, evidently an old Baalath. Or Sheikh Kâsim, north of Tyre, who, as Professor Palmer himself pointed out, is the Semitic god of "fate," the Phoenician Reseph, whose name M. Clermont Ganneau recognises in Arsûf (Apollonia), near Jaffa. Again, near Tyre (Sheet I, Me), Professor Palmer sees in Malkîyeh (a modern village) the name of Melcarth, the Hercules of Tyre, who is also recognisable as Neby Ma'shûk, "the prophet loved by women." And, had he been spared, the great Arab scholar would no doubt have added many other such interesting notes; for in Galilee especially Pagan and Phœnician influence is so marked that more of the Canaanite nomenclature may be expected to survive than further south.

On Sheet II (Pb) there is a very interesting spring named 'Ain Abu Sudûn. It is below a certain ruin called Juneijil, which is probably an old Gilgal. The name Poseidon has been thought by some scholars to be of Phœnician origin, and to signify "the great father of fishing" (or of Sidon), and if this be a really reliable derivation it is instructive to find close to Phœnician territory a Gilgal or "circle" where the name still seems to linger.

'Almân, close by this last, is an ancient Oulam of the Talmudic boundary

of Phœnicia (see "Handbook to the Bible," p. 304). There is another place of the name in Lower Galilee (Sheet IX, at top), and it is possible that both derive their name from the Phœnician deity called Oulam, or "eternal," and also Baal Haldim, or "the everlasting lord." It should also be noticed that Khuldeh is a name applying to several places in Galilee, in Philistia, and elsewhere. It is identical with the Phœnician Haldim, and has the same meaning of "enduring." This name seems a curious one to apply topographically, but like Baal, or Kadesh, or any other title derived from local worship, it is most easily explained (as is also Oulam, "the "eternal") as being a survival of the name of the local deity.

The *Ard Dufneh* (Sheet II, Re), near Banias, represents the ancient Daphne. It is the "land of Dawn," connected with all the sacred sun temples which surrounded Hermon, "the great sanctuary," and the groves of Banias or Pan, whom modern mythologists seem to regard as representing the refreshing breeze which blows from the snowy mountain above Banias.

*Haris* is another important name in this connection, and occurs in Galilee and also in Samaria. The Cheres, or orb of the rising sun, is often mentioned in the Bible, and the Galilean town (Sheet II, Oc) stands on the highest part of the watershed, whence a fine eastern view is obtainable. In Samaria, Kefr Hâris represents the mediaeval Caphar Cheres, the Mount Heres of the Bible, where Joshua was buried, and which the Jewish commentators render "village of the rising sun," and state to be so named because Joshua, who was here buried, had commanded the sun to stand still. Hâris is also a name of a mythical Arab sun hero.

*El Khâlisah*, "the pure," is another town name (Sheet II, Qc) connected with Paganism; for the ancient Arabs in Yemen had a famous temple of El Khâlisah at Tebala, which was called the Kaaba of Mecca (Pococke, "Hist. Arab," p. 106); and at Mecca, between the hills of Safa and Merwah, stood the stone sacred to El Khâlisah. In the fourth century the goddess Venus was worshipped at Elusa (El Khâlisah), in the Beersheba desert, and the "pure one" appears, therefore, to be a goddess (see Jerome's "Life of Hilarion").

The name 'Azziyeh, applying to a ruin on this sheet (II, Qb) is also probably pagan. There are several other instances in the nomenclature, such as Khûrbet 'Azîz (Sheet XXI) and 'Ozzîyeh (Sheet I). The radical meaning is "strong," "powerful," or "honoured," and it occurs in Hebrew in the well-known instance of the city of Azzah or Gaza. The demon Azazel derives his name from this root, and the modern Abd el Aziz is connected. The pagan Arabs adored a female divinity named 'Azzi, under the symbol of a thorn tree, and it is possibly from such a divinity that Gaza (the City of the Eight Gods) and other places of this name were called. El 'Azzi is mentioned in the Koran (Sura liii) as one of the goddesses of Mecca.

*Neby es Saddîk* (Sheet II, Oc) introduces us to another class of names common in Palestine. The word means "just," or "truthful," but it is specially used by the Jews to mean a Saint, or holy man. Thus one of the

best known Jewish tracts is called "the Graves of the Saddikim," and details a pilgrimage in Palestine by a pious Jew intent on visiting the graves of all the patriarchs and famous Rabbis, of whom so many lie buried round Tiberias and Safed. All the prophets called Saddik may be thought to have been Jewish Saints of the second to the seventh centuries, and these names are survivals of a very flourishing period, when the Sanhedrin had its headquarters in Galilee, and when the Mishna was being put in writing by the great Rab.

*Kul'at el Tūfanīyeh* (Sheet III, Nf) suggests a tradition which should be collected. It means "Castle of the Flood," and is the particular word used in Arabic especially to denote the universal deluge. *Bir Yush'a* (Sheet IV, Qd) and *Neby Yush'a*, due east of the ruins of Kadesh Naphtali, suggest some reminiscence of Joshua's contest against the King of Hazor in Upper Galilee, but no such legend has as yet been collected. The *Hummām Benāt Ya'kūb* (IV, Re) seems to be connected with a tradition which consecrates the upper part of the Jordan to the "daughters of Jacob," and which is at least as old as the twelfth century.

It is also remarkable that there is another Mount Hermon on this sheet north of Kefr Bir'im, a very lofty hill with a spring of the same name (Ain Haramūn) on the north-east (Sheet IV, Oe), and further south (east of Neby Sebelān) is *Jebel ed Dō*, "the mountain of light." These names, together with Mālkīyeh, near Kadesh (where is a Roman sun temple), all show how widely spread the Phoenician sun worship must have been in Galilee.

*Khūrbet Fasil Dāniāl*, "the ruin of the Judgment of Daniel" (IV, Ne), gives indications of another tradition not yet collected. *Khūrbet Nuseibeh* (IV, Pe), like the *Nusb 'Aweishīreh* near Jericho (Sheet XVIII), and the *Beit Nusib* of Judah (Sheet XXI), give evidence of the adoration of the "menhir" at the spot, concerning which much has lately been written. Professor Palmer himself understands the word in this sense, and it is found east of Jordan still applied to existing menhirs.

*Majnāneh* (Qd) and *Ain el Jinn* (Pf), on the same sheet (IV), show the existing belief of the peasantry in enchantment. *Mayhdret Sebelān*, "the Cave of Zebulon," indicates a legend connected with Neby Sebelān still to be collected; and the *Sheikh en Nettāh*, or "butter," shows the survival of a belief in some divinity with horns (Qc), who may be compared with the horned Neby Iskander (Sheet VIII), who is the legendary Alexander with ram's horns.<sup>1</sup> *Tell Abális* (probably corrupt for Iblis) indicates a legend which might be worth collecting (Sheet IV, Re). It is a large mound close to the Huleh, and evidently supposed to be haunted by Iblis. *Wādy Jehennum*, or "the Valley of Gehenna," is a curious name for the open valley west of Kadesh Naphtali. It may be connected with the sun temple here existing, and with the sunset or descent of the luminary on the west into the under world.

<sup>1</sup> This legendary "Alexander of the two horns" is mentioned in the Koran (Sura xviii), and in Persian literature.

*Khûrbet Mithilia* (Sheet V, Zi) means, according to Professor Palmer, "the ruin of the image," from the Phœnician word, and thus perhaps indicates a pagan shrine. The modern names of the two rivers Belus and Kishon on this sheet are also interesting. The Kishon is called in the Bible the "ancient river," which should rather (according to Gesenius) be rendered "the river of battles," from the root Kadam "before," "fronting," "east;" the modern name is *Nahr el Mukutt'a*, which Professor Palmer renders "river of the cut up one." According to the dictionaries *Makt'a* means the "ford of a river," which is Dr. Thomson's translation of the Kishon name; but the double T makes the word quite different, and Professor Palmer's translation is no doubt authoritative. The name may have one of two derivations, either from a tradition (whether monkish or indigenous) of the slaughter of the priests of Baal at this stream by Elijah, or perhaps more probably from a legend of the slaughter of Adonis or Osiris, celebrated in Phoenicia at sacred rivers. The Belus, or river of Bel, is now called the Nahr Nam'ein, "the river of blood," and *Nam'ein* is the name of the Anemone, which was sacred to Adonis. It must not be forgotten that Neby Naaman is the name of a divinity in Philistia ("Memoirs," vol. iii, p. 316), and that the blood of Adonis in the Nahr Ibrahim, north of Beyrouth, was believed by the Phœnicians to fertilise the lands of Byblos annually. It is possible that similar legends once clung to the Kishon and Belus, and are recognisable yet in their modern names. The purple of the Murex was also connected with the myth of Adonis, and the chief affluent of the Nahr Nam'ein is the valley called Halzûn—that is, the Chilzon or Murex.

'Ain *Eyâb*, at El Tâbghah, on the shores of the Sea of Galilee (Sheet VI, Qq), is an interesting name. I visited this "Spring of Job" in 1882, and found that it was certainly a sacred place, small offerings being here placed by the peasantry for the local divinity. The mill-owners on the spot were, however, unable or unwilling to give any legend of the spring.<sup>1</sup> *Hajr en Nemleh*, "the Ant's Stone," near Magdala, has also probably some legend attached, and these two might perhaps be collected by one of the numerous visitors who travel to this lake every year. *Hajr ed Dumm* and *Hajr el Muneik'a* (Sheet IV), the "Stone of Blood," and the "Stone of the Cup Hollow" are two dolmens of which I have elsewhere spoken more fully.

Another interesting circumstance on Sheet VI is the recurrence in several places of the name Cæsarea. *Kaisarîyeh* (Pg) and *Keishârân* (Oh) are ruins on this sheet, and Wâdy Keisâriyeh is near the former. The reason is evident. They are survivals of the old Roman district name; for in the fourth century the episcopal town of Sepphoris was called Dio Cæsarea, and these ruins lie in the district of the same name.

*Kul'at el Ghâl*, "the Ghoul's Castle" (cf. Sheet XVII), shows the localising of a common superstition; but the *Kûsr Bint el Melek*, or "House of the

<sup>1</sup> This name is probably connected with the story in the Koran of a spring which rose by divine command when Job struck his foot on the ground (Sura xxviii, 40, 41).

King's Daughter" (Sheet VI, Qh), on the cliff south-west of Tiberias, indicates a tradition not yet collected, and which it might be of interest to some future tourist to endeavour to record. *Merj es Sunbul*, "the meadow of the ears of corn," probably indicates a Christian tradition, localising the Gospel episode of plucking corn on the Sabbath (Matt. xii, 1-8).

*Mughâr el Kurûd* (Qg) gives evidence of a local belief in the Kurûd, or monkey-like goblins, who are the terror of the belated Syrian peasant.

*Sitti Sekinah* (Qh), close to Tiberias, is a very interesting name, for it is the modern form of the Hebrew Shechinah. Like most of the sites round Tiberias it is no doubt of Jewish origin. And it is remarkable that on the plateau west of the lake is a place called *Mes-hah*, or "anointed;" for it is well-known that the Jews of Galilee believed that the Messiah would rise from the Sea of Galilee, an idea probably derived (as are so many in the Talmud) from the Persian eschatology, which represents the future prophet as rising from the eastern lake, or from the ocean.

It is curious also that Neby Shu'aib, or Jethro, should have a shrine at Hattin, and that the basalt cliffs to the south should be called Medinet el Aikeh, "the City of the Grove," which, as Professor Palmer points out, was the name of the city to which Jethro was sent, according to the Koran, to preach to its inhabitants. The localisation of Jethro no doubt led to the localisation of the City of the Grove, and we may perhaps find the origin of the idea in the Book of Judges; for Heber the Kenite was a descendant of Hobab, the father-in-law of Moses (Judges iv, 11), who is thus identified with Jethro (Num. x, 29). I have endeavoured to show, in "Tent Work in Palestine," that it was exactly in this plain of Hattin, east of Tabor, that Heber and Jael pitched their tent, and the tradition of Jethro perhaps grew out of the old episode of the defeat of Sisera. In the Koran (Sura xxvi) the "City of the Grove" is said to have been in Midian; but the accompanying legend of Saleh, whose camel was houghed by the men of Thamud (Sura vii, 71), is also localised—not, as it should be, in Arabia, but in the Valley of Elah (see Sheet XXI), at the *Medhbah Nâket Saleh*. Neby Hud also (Sura vii, 63) is localised at El Yehûdiyeh, near Jaffa (Sheet XIII), and not among the Aclites, where he is said to have preached.

*Birket Belâkîs* (Sheet VII, Ib) is worthy of notice as preserving the traditional Arab name of Queen Zenobia, which also survives near Heshbon in "Zenobia's Garden." *Ez'bâba* (Sheet VIII, Mk) is interesting as giving us the name of Baal Zebub in the plain of Esdraelon; and *Sheikh Meiser* (Sheet VIII, Kl) is also interesting as rendered by Professor Palmer, who connects it with a "certain gambling game with arrows." The same name applies to the shrine at Bethshemesh (Sheet XVII), and Meiser is there locally said to have been related to Samson. He is evidently the Arab god of fate, "the arrow holder," Hobal of Mecca—the same as the Phoenician Resheph; and the divining by arrows over which he presided, is mentioned in Ezekiel in connection with the King of Assyria (Ezek. xxi, 21). It was also a Jewish custom (Midrash Ekha Rabta, 54, Midrash Koheleth, 116), and has been thought to be referred to in the history of David (1 Sam. xx,

19-40), and of Elisha (2 Kings xiii, 14-19); but in the Koran this custom is denounced.

The Galilean names thus briefly noticed give, when taken together, a very fair idea of the growth of nomenclature in Palestine. We have in all five classes represented. First, Biblical names. Secondly, Pagan titles, which recall the nomenclature of Phoenician sun worship. Thirdly, Jewish names of the later period, when Galilee was the centre of the Rabbinical teaching, and when the bounds of the Holy Land were defined with all the precision of the earlier Talmudic writings; when famous Saddikim were buried in all the principal villages, like Simeon bar Jochai at Meirûn. Fourthly, we have the Christian traditions of the fourth and twelfth centuries, localising round the Sea of Galilee the Gospel episodes, pointing out the "Table of Christ," "The meadow of the ears of corn," "The Mountain of the Sermon," the scene of the "Feeding of Five Thousand," and many other sites, in places often not in accordance with the Gospel narrative. Finally, we have the superstitions of the Fellahin in Moslem garb, the Jinns, the Goblins, the Iblis and Ghoul, which are figures traceable in the Accadian legends as far back as history itself.

Several valuable explanations are derivable from the above examination, showing how the Gazas, the Khuldehs, the Aulems, and such other names as have no proper topographical derivation, originated in the names of the local pagan deities. For Galilee was, until long after the Christian era, a land of Goin or pagans, who built sun temples at Kadesh and round Hermon, and preserved the rites of Adonis and Ashtoreth even down to the fifth century of our era. The nomenclature of the southern sheets of the map does not give us as much that is of this peculiar interest as do the Galilean sheets, and the principal names in Samaria and Judea have already been discussed in such papers as those on the Moslem Mukams, on Early Traditions, and on the nomenclature, which will be found in the volume of special papers of the "Memoir" series.

C. R. C.

### MASON'S MARKS.

THESE marks, noted on buildings during the course of the Survey, have been carefully recorded in the "Memoirs;" and some remarks as to their dates have already been published in the paper on Architecture (vol. iii, p. 447). They include all the letters of the alphabet save G, Q, and X, and have no reference to position in the building, nor are they distinctive of a particular district, nor are they confined to the lifetime of an individual. It is, however, now proposed to study this question rather more fully in detail.

There are a few remains of masons' marks which are earlier than the twelfth century. Such are the letters on pillar shafts at Ascalon (vol. iii,

p. 240), which resemble Aramaic letters, and are not unlike marks on the flooring of the Sta Sophia at Constantinople. Such also are the Greek letters on the drafted stones at Baalbek, and those on pillar-bases at 'Amman, both probably belonging to the second century, A.D.; but these are quite different from the great majority of masons' marks in Palestine, which belong to the twelfth century, and which closely resemble the marks in English cathedrals of the same period.

Sir Charles Warren has published some of the marks found on the castle at the port of Sidon (*Quarterly Statement*, 1870, p. 326), which are clearly Crusading; but others from Lebanon and Coele-Syria (p. 328) seem to be earlier, perhaps Roman.

A very fine collection was obtained by Lieutenant Mantell and myself in Kalat el Hosn, above Tripoli, in 1881, many of the marks being on drafted stones. The earliest mediaeval building on which they would occur cannot date before 1100 A.D., the latest not after 1187 in Palestine, with exception of fortresses in the maritime plain, which, together with those in Northern Syria, were held till 1290 A.D. by the Christians.

The letters of the alphabet are not of any special interest. They may, perhaps, be the initials of the masons, and their shape is generally somewhat Gothic. There are, however, certain signs used quite as often as letters, which are interesting as being of great antiquity and widespread use.



Thus, for instance the Solomon's seal, or five-pointed star, is among the most common of the marks. It has been found on the vaulting of the so-called Stables of Solomon, at St. Jeremiah's of Abu Ghosh, in the Muristan, in the Hosn Castle above Tripoli, and elsewhere. In the middle ages this was a well-known magic figure, and it may be regarded as a "luck-mark," like others which follow.



The six-pointed star is known, I believe, as "David's Shield," and is formed by two triangles. This is a caste mark in India of worshippers of Parvati, and is occasionally found as a mason's mark.



The Lituus is a very common mark among masons, and with regard to this it may be noted that it is found in the Sceptre of Osiris and of Siva, as well as among Druids and in Persia. It occurs at Jerusalem in the Church of the Virgin's Tomb, in the Muristan, at Neby Samwil, and in many other Crusading buildings.



The Trident is also common in the Muristan, at Samaria, and elsewhere, and it is identical with the caste mark of Vishnu, who answers in India to the Greek Poseidon with his trident. Whatever its original meaning it is a very old sacred emblem, and the fleur-de-lis, which is sometimes used as a mason's mark (though rarely), is said to have a common origin, and is traced back to the Assyrians as a religious emblem.



The hour-glass, or double triangle, is also found in a great many buildings in all parts of Syria (all of Crusading date), and is occasionally turned sideways, and converted into a Tau, or mason's hammer; for it should be observed that the position of the mark on the stone is not uniform in the case of any sign.

 The arrow occurs in many varieties, of which the one with a triangular head is perhaps commonest. It is, perhaps, connected with our English broad arrow, and thus with the trident already noticed. The arrow or spear-head is also an Indian caste mark.



The Trefoil is also not unusual in various forms, and is said to be one of the letters of the Slav alphabet about the ninth century.



 The square in several varieties is also suggestive of masonic meaning, as is the right-angled triangle, and the equilateral triangle, which is Siva's mark in India.

The Greek *Phi*, the fish, the bow and arrow, the circle (with or without a central dot), the palm-leaf, the cross (both Greek and Latin and Maltese) the mason's square, and the star, are marks which do not require any diagram, but all are frequently used.



The eight marks figured are not easy to describe. The first to the left is very common, and perhaps represents the crozier, or shepherd's crook, under a different form; the second is nearly akin to the sign of the planet Venus; the third and sixth are forms of the trident; the seventh is the sign of Aries.

When we begin to inquire as to the meaning of these signs, and the reasons of their use by mediaeval masons, we must remember how much Europe owed to Asia, at this time, of its science and mysticism. Magic was derived originally from the Magi, and the influence of the Jews and Arabs on the races of Southern Europe in the ninth and tenth centuries was specially marked. It is therefore very interesting to remark that masons' marks have been found on Sassanian buildings in Persia, many of the most complex of the mediaeval signs being exactly the same as those on the walls of the palace of Saaditalat near Ispaham, as copied by Ouseley. The hour glass, the various forms of the trident, the bow and arrow, the cross even (a simple pair of lines of equal length), the arrow-head, and other marks are to be found among the Persian emblems. In this case we have, perhaps, a historical link between Europe and the far East. The masons' marks are generally too artificial for it to be naturally likely that they would be separately invented by different races; and all the tendency of modern science has been towards the establishment of a direct historical connection between the early religious emblems and ideas of Asia, and the later mysticism of Europe.

We may, perhaps, safely infer that to the mediaeval masons the marks they employed had descended as traditions, and that in some cases at least they were regarded as propitious emblems, or "luck-marks," although their original meaning had, perhaps, long been forgotten. A tradition of the meaning of many of these symbols, such as the bow, the trident, the arrow, the *phi*, the *lituus*, still lingers in India; and may, perhaps, be known to

initiated masons in England, although to an outsider such titles as Solomon's Seal, the Mason's Hammer, &c., seem rather to indicate the loss of the true meaning.

It should be noted that masons' marks do not appear to have been used by the Jews, or in Byzantine times, or by the Arabs of the fourteenth and fifteenth centuries. They thus serve in Syria to distinguish the work of the Crusaders, and the traveller who wishes to distinguish the somewhat similar structures of the later Christians and early Arab conquerors, in the thirteenth and fourteenth centuries, will obtain in the discovery of masons' marks one of the most certain distinctions he can generally hope to find.

C. R. C.

## HAMATH INSCRIPTIONS.

As everything touching on the decipherment of the new hieroglyphies must be of interest, I may perhaps venture to call attention to a comparison which struck me forcibly when, after seeing the Hamath stones in the museum at Constantinople, I had, in the same year, an opportunity of inspecting the very ancient wooden hieroglyphies from the tomb of Hossi preserved in the Boulak Museum at Cairo. These Egyptian hieroglyphics are in relief like the so-called Hittite texts, and some of the symbols at least appear to be identical.

*The bull's head* is a symbol on Hosi's tomb (as a hieroglyphic), and on the Hamath stone No. 3, or the Jerabīs text No. 3.

*The antelope's head* occurs also in each of three texts just quoted.

*The bird in profile* (the Egyptian Aleph) is also found on the Jerabīs inscriptions.

*A pillar on a square base*, found in the Hamath stones, occurs also at Sakkarah.

*The knife blade*, a common constituent of Egyptian hieroglyphic letters, is also found on the Hamath stones.

*The head of Im-hotep*, or Horus, with the finger to the mouth, is very frequently reproduced on the Hamath and Jerabīs stones.

*The human foot*, a well-known Egyptian symbol, is found on the longer inscription from Jerabīs.

*The oval*, which resembles the eye, is an Egyptian symbol, and seems to recur on Jerabīs No. 3, and in other cases.

*The hand extended*, or holding a dagger, is common on the Jerabīs and Hamath stones; on the tomb of Hossi, in Egypt, the extended hand is also a symbol.

*The human head* is found on Hamath stones and Sakkarah hieroglyphies.

*The cross*, not uncommon on the Hittite stones, may be connected with the Egyptian Ankh, or with the Assyrian cross.

It may also be noticed, as cognate to the present subject, that some of

the emblems found on the brass plate obtained by M. Peretie from Palmyra (and which resemble closely the emblems found at Bavian over the king's head) are also identical with symbols on the Tomb of Hossi, or in the hieroglyphic text from Sakkarah, figured by Perrot, which appears also to be very ancient. One of the emblems of Bavian is also identical with one frequent on the Hamath and Jerabis inscriptions; but the Bavian, with other Babylonian emblems, appear to symbolise the planets rather than to form inscriptions. Herodotus (II, 91 and 102) gives a curious account of a mark on the columns of Sesostris (now recognised by Professor Sayce as Hittite monuments), which the historian regarded as indicating derision of effeminate enemies. It seems possible that this mark is recognisable in the oval ring of the Hamathite inscriptions.

These remarks are offered with much diffidence, because it is possible that such comparisons have already been made by the learned authorities who have studied the Hamath inscriptions. It is, however, possible that a careful comparison of the Egyptian and Hittite symbols, by a scholar thoroughly conversant with hieroglyphics, might lead to interesting results, and if a cursory comparison leads to the identification of ten symbols as more or less intimately connected, longer study might, perhaps, give more definite indications. The Egyptians, like the Hittites, were an Asiatic people. They seem to have brought their system ready made with them when they entered the delta, and there is thus no *prima facie* improbability in a common origin having existed for Hittite and Egyptian characters.

C. R. C.

### THE NORTH BORDER OF ZEBULON.

THE north boundary of Zebulon is one of the most difficult to draw of all the tribe borders. The southern line has been greatly elucidated by the Survey identifications of Nehallal, Sarid, Maralah, and Abez. On the north side the line has been indicated by the new sites for Hannathon, Neiel, Achshaph, and Beth Dagon, but it will be found (see "Handbook to the Bible," p. 268, 3rd edition) that Dabbasheth remains unknown. The verse in which this name occurs reads thus:—

"And their border went up towards the sea (or west) and (to) Mar'alah, and reached to Dabbasheth, and reached to the river (Nâkhal) in face of Jokneam" (Josh. xix, 11).

It seems quite possible to understand that Dabbasheth is here mentioned as at the opposite extremity to the Kishon, or river facing Jokneam, and in this case it is to be sought on the north border. The latter is described in two verses of the same chapter (verses 14 and 27) as running from Hannathon (Kefr 'Anân) to the Valley of Jiphthah-el ("opened by God"), and again as going from Beth Dagon east to Zebulon (apparently, as in Josephus, also 2 "Wars," xviii, 9; 3 "Wars," iii, 1, a town), and to the Valley

of Jiphthah-el towards the north of Beth Emek and Neiel, and going out on the left (*i.e.*, north) of Cabul. This description is not easy to follow, but it seems at length to be explained by the following seven identifications, three of which I proposed before 1879, and two new, but agreeing in a most remarkable manner with the rest. The list reads thus :—

Beth Dagon	...	...	...	<i>Tell D'aûk</i> , C.R.C.
Cabul	...	...	...	<i>Kabûl</i> .
Neiel	...	...	...	<i>Y'anîn</i> , C.R.C.
Beth Emek	...	...	...	<i>'Amka</i> .
Dabbasheth	...	...	...	<i>Dabshek</i> , C.R.C.
Zebulon	...	...	...	<i>Neby Sebelân</i> , C.R.C.
Hannathon	...	...	...	<i>Kefr 'Anân</i> , C.R.C.

The new proposals are Dabbasheth and Zebulon, and no question can arise as to the exactness of the reproduction in the Arabic of the older name. The line is one which would not be expected, but its correctness is shown by the way in which it fits together details which have hitherto appeared irreconcileable. Thus, for instance, Beth Emek is so far north of Achshaph and Cabul, if placed at 'Amka, that it seemed hopeless so to identify it in spite of the identity of name, while Zebulon at Neby Sebelân is also north of Ramah of Naphtali, and Dabbasheth at Dabshek (though evidently the names are identical) seemed equally out of place.

If, however, the reader will take Sheet I of the reduced map, or Sheets III, IV, V of the large map, he will, I think, soon become convinced of the exactitude with which the north boundary of Zebulon may now be laid down. It begins (on Sheet V) at the Belus river, which is the Shihor Libnath, or "river of glass" (Josh. xix, 26), mentioned as the south boundary of Asher. It is true that great confusion has arisen because some have placed Shihor Libnath much further south, led by the context, "and to Carmel westwards;"<sup>1</sup> but the best authorities agree that the Belus—the traditional site of the discovery of glass—is the true Shihor Libnath. Immediately east of its course is Tell D'aûk, which represents Beth Dagon, just as 'Ain Dûk represents the Dagon near Jericho, and thence we must draw the line "towards the daybreak" at the foot of the low hills north of Cabul, or Kâbûl. Two miles north and rather east of this latter is Y'anîn, which preserves all the radicals of Han Neiel with the change of the last L into N (as Beitin for Bethel, &c., &c.), and we thus reach the mouth of the gorge where Wâdy Sh'aib flows out west to meet Wâdy esh Shâghûr coming from the north.

Turning now to Sheet III, we find a long spur running up northwards from Wâdy esh Shâghûr towards the Kul'at et Tufanîyeh, or "Flood

<sup>1</sup> Apparently Carmel ha Yamah would mean properly "the western Carmel," or Carmel of the Sea, perhaps to distinguish it from Carmel in the tribe of Judah. I have, however, pointed out (see volume of "Special Papers," p. 229) that the Samaritans apply the name Carmel to the shore as far as Acre. The "Samaritan Chronicle" speaks of the frontier of Carmel as far as Acco.

Castle," which must retain some curious legend not yet collected. We have now to take into consideration the towns of Asher, which tribe here marches with Zebulon, and these include the following :—

Helkath ....	....	....	....	<i>Yerka.</i>
Hali ....	....	....	....	<i>'Alia,</i> C.R.C.
Beten ....	....	....	....	—
Achshaph ....	....	....	....	<i>Kefr Yasif,</i> C.R.C.
Alammelech ....	....	....	....	—
Amad ....	....	....	....	<i>El 'Amid,</i> C.R.C.
Misheal ....	....	....	....	<i>in Wâdy Maisleh,</i> C.R.C.
Beth Emek ....	....	....	....	<i>'Amka.</i>

This list serves to confine our line on the westward side in a most definite manner, although Beten ("The Knoll") and Alammelech (God-King) are, unfortunately, still unknown. El B'aneh has been thought to represent the first, and is not absolutely forbidden by the line proposed (see N. f. Sheet III), which may have run up the hill by it. Alammelech was probably near Amad, far from the border, and as the Melek in question is very probably the Melkarth of Tyre, there may very likely be some reminiscence of the site in Wâdy M'ashûk, "Valley of the man beloved by women," which is the modern name (Neby M'ashûk) under which Melkarth now appears at Tyre (see Vol. III of "Memoirs," Appendix).

The general result of these considerations is the determination of the towns of Asher as lying in the plain or in the low hills, not more than 1,200 feet above the sea, whereas our boundary line, ascending northwards from Neiel (Y'anîn), is running on the high ridge about 500 feet above the Shephelah of Asher, and east of all the towns of that tribe. Skirting along the edge of the mountain district it passes Yanûh (Janohah), and reaches the ruin of Dabsheh, 2,060 feet above the sea (Sheet III, lat. 33°, long. 35° 15'). At this point we are looking down on the slopes which descend northwards into the great ravine of Wâdy el Kurn, and it is therefore quite natural that the border should pass east from this point. Thus, Dabbasheth, according to the new identification, stands exactly at the north-west corner of the tribe, and is therefore most appropriately mentioned as a border point in the earlier and more general description of the line.

From this point to Hannathon, which was at the north-east corner of the tribe line, we have only two names mentioned to guide us, but these are quite sufficient.

If we turn to Sheet IV, lat. 33°, we at once find, some two miles east of the sheet line, Neby Sebelân, which is a village enclosing the supposed Tomb of Zebulon, son of Jacob. We find also a long valley bend, ~~draining northwards from the ridge of Jebel Nînah, and forming the true course of~~ Wâdy el Kurn. This is one of the most considerable valleys in Galilee, well fitted to form a natural boundary line between two tribes. As regards these two places, I propose to recognise in Neby Sebelân not only (as I proposed in 1877) the town of Zebulon mentioned by Josephus, but also

the Zebulon of the passage in Joshua (xix, 27), which it seems almost impossible to consider as referring to the tribe boundary simply. Indeed, so much has this been felt, that some have proposed 'Abellin as the site of Zebulon—an idea which hopelessly confuses all the topography, and which has philologically a great objection.

The identification of Zebulon leads us to suppose that Wâdy el Kurn is the valley called Jiphthah-el in the Bible, and the great precipices along its course, especially north of Dabbasheth, might well account for the name "Cloven by God;" but no remains of the old title seem recognisable, and this is the case in other instances, as I have had occasion often to point out. Shihor-Libnath, Mejarkon, Elah, Cherith, Kedron, and many other famous valleys of the Bible, are now known by other names, and in the case of Sorek and Jezreel, the Hebrew title adheres, not to the valley, but to the town whence perhaps the valley was named, just as the modern Wâdys are named from the villages.

Having thus far followed the line of important natural features, we are now able to finish our tracing without any difficulty to Hammathon (Kefr 'Anân); for Râmeh (Sheet IV, O. f.) is in all probability Ramath of Naphtali (Josh. xix, 35), and must therefore be excluded north of our boundary. It is clear, then, that we leave the high mountains of upper Galilee, and descend into the flat plain of the Shaghîr, following the foot of the southern slopes of the great Jebel Heider ridge.

If the reader will refer to my "Handbook of the Bible" (Map No. 5, p. 252, and p. 269), he will find that great doubt existed as to the borders of Asher, Naphtali, and Zebulon, and as to the place where these three tribes marched. Having fixed Hammathon and Neiel, it seemed natural to join these two points by a line along Wâdy Shâghîr, which seemed evidently to be the proper Jiphthah-el. But our knowledge is now extended by the discovery of Dabbasheth and of Zebulon, and we are thus able to recognise the old identification of Beth Emek as a true one, and to draw the line more accurately than before, but without changing a single previous identification save that of Jiphthah-el, which was merely a conjecture.

It has not been thought necessary to swell this paper by discussing the east and south borders of Zebulon (the western being the sea, and therefore unnoticed in the Bible). It may be noted that the Survey has indicated Hammathon, Nehallal, and Sarid, all very important points, while Neah is very probably *B'aïneh*, which allows of the line being drawn from the Kishon to Tabor, and so north without any hesitation to Kefr 'Anân, thus coinciding with the natural lines of the country throughout the whole course. Dr. Grove's suggestion of Kefr Kenna for Kazin also appears to be confirmed by these investigations.

The new boundary gives another instance of the laws observable in the case of those traced for other tribes (cf. "Handbook," p. 270).

~~It is clear that the boundaries selected for use in Joshua was not so selected because they define the tribe boundaries. It is clear that the great natural features—valleys, watersheds, prominent spurs—are the real old tribe boundaries, just as they are the boundaries of the existing~~

divisions of the various districts. I have always felt, however, that this border of Zebulon was the one least certainly traced, for though the Survey suggestions for the territory of Naphtali, of Benjamin, of Dan, and of Ephraim, contain many striking novelties, they have been sifted much more completely than that now described, and they seem to me to have stood the test. The reader is invited to trace the present line on the map, and to form his own judgment as to the border of Zebulon, and he will find that the Survey identifications have cast equal light on every other border of the twelve tribes.

In the present case there are sixteen identifications on which the border line depends, and out of these only two of minor importance remain very doubtful. Out of the sixteen, ten are due to the Survey of Palestine, and were unknown to Robinson, Grove, or any other pre-survey authority. This instance alone seems, therefore, to indicate how much we have gained, from a Biblical point of view, by surveying the Holy Land.

C. R. C.

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### NOTES.

THE following remarks as to the last *Statement* may be worth noting.

1st. *Numbers of Israel*.—On p. 99, the writer, C. M. W., has made a curious mistake. He computes the space occupied by the Israelites, supposing their numbers to be 600,000, but this was the number of the men (*Exod. xiv, 37*) ; the children, women, and others are to be added ; and if the writer of the passage is following the usual Oriental fashion of numbering only the men able to bear arms, the whole host would have been about three millions, but at least the number must be doubled.

2nd. *North Boundary of Palestine*.—One or two objections may be noted. *Shebrûh* is spelt with a cheth at the end (see the lists of Robinson, &c.), and is thus radically different from Sibram (see p. 103), without mentioning that the Samech becomes Sin instead of Shin in Arabic. *Kureitein* (p. 104), is not derived from *Kir*, but from *Kuryeh*, the Hebrew *Kirjath*, and is an Arabic dual form. It appears to me quite clear that the Hauran of Ezekiel is the modern district of Hauran, which the writer denies ; but this is perhaps a matter of opinion only. It is, however, not correct to say that Berothah is undoubtedly *Beirût*, for this has been disputed on very good grounds, and is still an open question. The suggestion of *Juneh* for Hazar Enan is also not satisfactory, for the J is the Hebrew Gimel, and although the Ain and Gimel are known to be interchanged occasionally, there are three possible sites for Hazar Enan which do not necessitate so violent a conversion of sound. The situation of *Juneh* seems to me inadmissible for Hazar Enan, and I hope to prove that the Mount Hor

which existed north of Palestine was the Lebanon inhabited by the *Khar*, or Phœnicians.

*Siloam*, p. 105.—A misconception seems here to arise, as there is certainly but one aqueduct from the Virgin's Fountain to Siloam, viz., that known to Gesenius, Robinson, and all later writers.

*Tomb of the Twelve Patriarchs*, p. 109.—It seems to have escaped notice that these have been found by the Surveyors in Shechem, where Jerome also knew them, though the Samaritans have a different belief (see "Memoirs," vol. ii, pp. 218, 220).

*Rachel's Tomb*.—Herr Schick says (p. 111) that the tomb north of Kustul is sometimes called Kubbet Rahel. I have asked on the spot more than once, but never was able to confirm this view. But even if it were the case, this site could not possibly represent the Tomb of Rachael, which is specially mentioned as near Ephrath (Gen. xxxv, 16). This position agrees exactly with the border of Judah according to the line which I have proposed ("Handbook to Bible," p. 258).

G. R. C.

## THE ROUTE OF THE EXODUS.

WHILST studying Canon Scarth's article on "The Route of the Exodus," together with the four papers on the same subject that appeared in the last *Quarterly Statement*, and Brugsch Bey's statement of his theory, I have been forcibly reminded of the well-known story of the two knights riding from opposite directions, and disputing about a certain shield that was suspended between them, which was silver on the one side and golden on the other. The antagonists on the vexed question of the Route of the Exodus seem to me to represent these knights, and I have worked out a theory which tends greatly to harmonise the various routes proposed by Brugsch Bey, Captain Conder, Canon Scarth, and other authorities, by showing the Yam Suph to present a different aspect according to the side from which it is viewed, like the shield in the allegory.

A year or two ago, when standing on the shore of the Red Sea near Suez, I felt my heart thrill within me at the thought that my feet were pressing the very spot whence the children of Israel passed over dry-shod. I then held the view which I had embraced with unquestioning faith in the days of childhood; but I have since become convinced of the physical impossibility of the Red Sea being driven back at this point by the east wind.

Unless, therefore, we are prepared to translate the Hebrew words rendered "east wind" in our Authorised Version as simply a "contrary wind," we must, I think, give up the formerly received identification of the crossing-place of the Israelites; but we are not thereby called upon to cease calling the Red Sea the Yam Suph.

In ages past the Red Sea appears to have been continuous from the modern Aden to a point north of Zoan, and probably at one period it extended as a strait between the Indian Ocean and the Mediterranean. In course of time, however, its entrance into the latter sea became silted up, and it then presented the appearance of a serpent's forked tongue, the two forks being Lake Menzaleh and Lake Serbonis.

It was then so full of algae as to receive the appellation "Sea of Seaweeds." By-and-by the centre part dried up, leaving isolated basins of brackish water, to the south of which was the Red Sea itself; to the north, Lakes Menzaleh and Serbonis, the two latter forming one whole. Much as we find the brook Kedron bearing the same name throughout its course, though a great part of that course is lost to sight far underground, so the northern and southern portions of the Red Sea, though now severed from each other, still kept the same designation, namely, that of "Sea of Seaweeds," which the Israelites translated by *Yam Suph*.

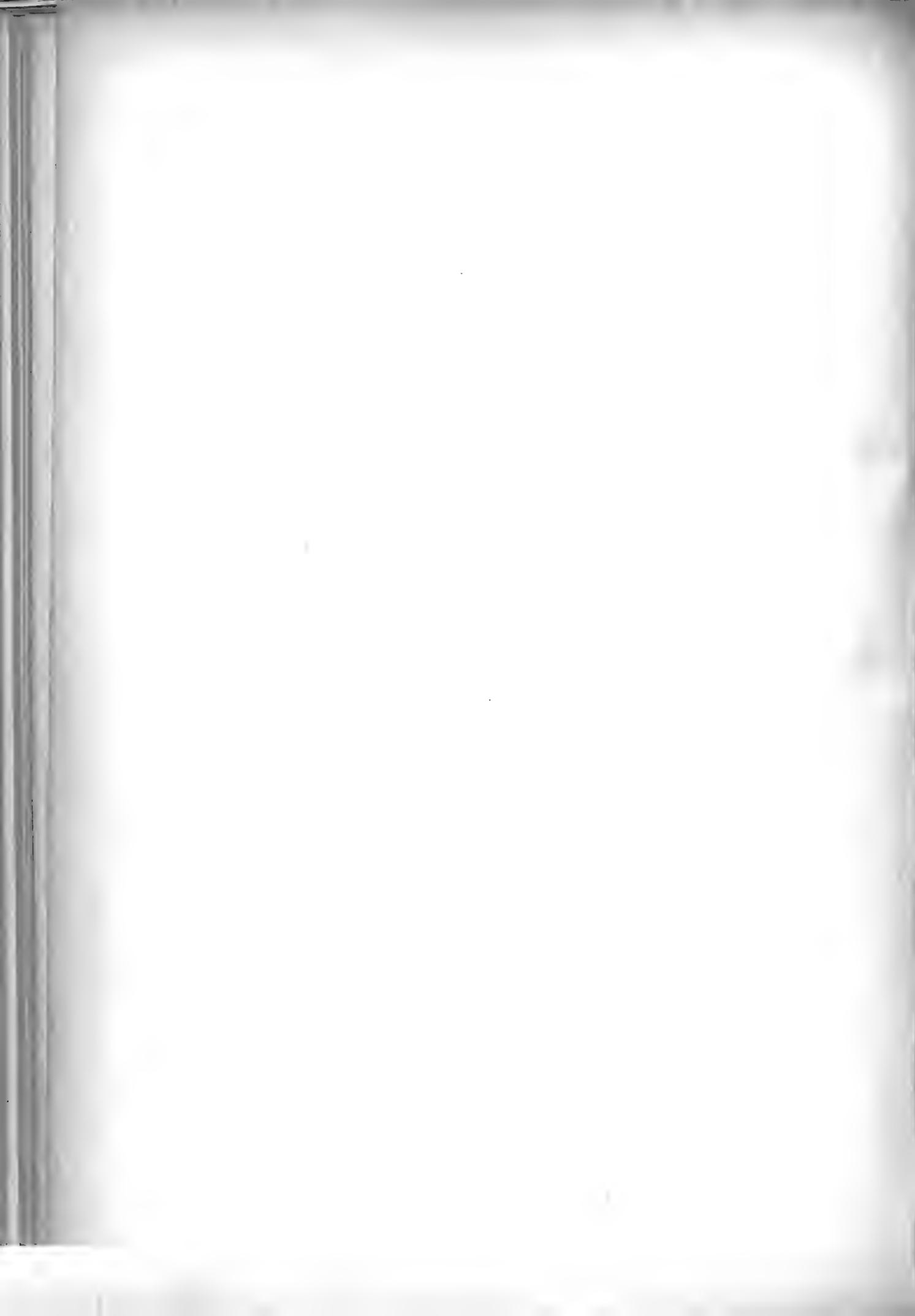
Even at the present day the appellation "Sea of Seaweeds" continues to be appropriate to the Red Sea proper; but from the moment when its northern portion (afterwards called Lakes Menzaleh and Serbonis) became severed from the southern, and ceased to have any connection with the sea, the characteristic vegetation of this sheet of water underwent a change, and reeds, such as papyri and flags, took the place of algae. Inappropriate as the English name "Sea of Seaweeds" would now have become to this large lake, yet the Hebrew term was not at all so, for *Yam Suph* bears the meaning of "Sea of Reeds," as well as that of "Sea of Seaweeds," *Suph* or *Soph* being used in Exodus ii, 2, to designate "flags," whilst in Jonah ii, 5, the same word conveys the meaning of seaweeds.

I think Canon Scarth has shown conclusively that the *Yam Suph* of Exodus x, 19, into which the locusts were blown by "a west wind," was Lake Menzaleh; for, as he points out, "a north wind would be needed to blow them forty or fifty miles over the desert to reach the Red Sea at Suez." This would help to fix the starting-place of the Israelites at the modern San, the ancient Zoan, or Rameses, an identification upon which most authorities are now agreed. No such unanimity, however, prevails regarding the subsequent stations of the Exodus.

Powerful as are the arguments adduced by Captain Conder (in the last *Quarterly Statement*) against the theories of Canon Scarth and Brugsch Bey, I must confess to not finding them convincing.

In the first place, with regard to the ancient physical features of the Delta, the fact must be borne in mind that not only have Roman graves dating from an early period been discovered at Port Said, and ancient Roman towns not far to the south of it, but that Greek antiquities of the time of Ptolemy have been lately found upon islands on the bosom of Lake Menzaleh, close to Port Said, where Greek cities were situated in the days of that great geographer, thus proving that in Ptolemy's time the towns of Egypt extended to much the same north latitude as Port Said does now. As to the absence of water on a portion of the Kantara route, the difficulty would be no greater than that which the Israelites had after-





wards to encounter, when, as we read in Exodus xv, 22, "they went three days in the wilderness and found no water."

Then with regard to the objection to the Israelites with women, children, flocks, and herds, having taken the long daily marches which the route proposed by Canon Scarth is supposed to imply, I would answer, in the words of Mr. Pickering Clarke, "Are we obliged to allow only three days after leaving their homes before the Israelites made their encampment at Pi-hahiroth? The Bible account does not say so."

The close agreement of the localities mentioned in the papyrus dating from the reign of Seti II, with those referred to in Exodus xiii, xiv, as the camping-places of the children of Israel, seems more than merely accidental. The route proposed by Canon Scarth coincides with that followed by the pursuer of the fugitive slaves nearly 3,000 years ago as far as Migdol, where it trends north-westwards, leaving the caravan route to Syria; for here God commanded the Israelites to "turn," because He "led them not through the way of the land of the Philistines, although that was near; but God led the people about through the way of the wilderness of the Yam Suph;" and in thus turning they continued to keep the Sea of Reeds close on their left as they had done ever since leaving Rameses.

The identification of Pi-hahiroth, originated by Canon Scarth, is most striking in its exact fulfilment of all the requirements of the Bible narrative, and not less so is his localisation of the crossing-place of the Israelites from thence through the Yam Suph to the bank of sand which divides this Sea of Reeds from the Mediterranean.

Many people have, however, been led to reject the Canon's theory altogether, because of the subsequent march to Port Said and back, which he imagines the children of Israel to have undertaken; but it seems to me that the necessity for this march may be obviated by supposing Lake Menzaleh and Lake Serbonis to have formed one Sea of Reeds at this period, connected opposite Pi-hahiroth by a somewhat shallow strait. When the east wind blew, this strait would become a broad isthmus of sand, a watershed between the two lakes over which the Israelites would cross, having the waters of the Sea of Reeds as "a wall unto them on their right hand, and on their left." Arrived at the sandbank before mentioned as the northern boundary of the Yam Suph, they would turn to the south-east and continue along it, skirting the seaward shore of Lake Serbonis,<sup>1</sup> thus having still a wall of waters on either side, the left hand wall being now the Mediterranean, the right hand one the Sea of Reeds as before.

<sup>1</sup> As in after times (when the strait dividing Lakes Menzaleh and Serbonis became permanently dry land) a high road from Asia is said to have run past the Temple of Zeus Casius along this very sandbank to the north of Lake Serbonis, it is unlikely that in the days of the Exodus it was intersected by either the Pelusian mouth of the Nile, or the inlet of the Mediterranean described by Mr. Chester in the *Quarterly Statement* for April, 1881, though it is possible the Mediterranean may have occasionally broken over the strip of sand in a west wind, and that its doing so to the rear of the marching Israelites may have added to their safety, and aided in the destruction of their foes.

Meanwhile, Pharaoh's host had begun crossing over the natural bridge, but the east wind ceasing to blow, the isthmus disappeared beneath the rising waves, and the Egyptians perished in the Yam Suph, or sank into the numerous quicksands abounding in the neighbourhood of Pi-hahiroth ; "the sea covered them," and "the earth swallowed them" (Exod. xv, 10, 12).

Being now freed from all fear of pursuit, the Israelites took a southerly course, which led them first for three days through the desert of Shur. They seem, from Numbers xxxiii, 8, to have occupied another three days in traversing the wilderness of Etham, so that it was not until the evening of the sixth, or the morning of the seventh day after they had quitted the shores of the Sea of Reeds, that they reached Marah, which appears to be satisfactorily identified by Canon Seath and Brugsch Bey with the Bitter Lakes. Elim may possibly be Ayún Músa (the "Wells of Moses") ; at all events it is clear, from Numbers xxxiii, 10, that the day after leaving Elim the Israelites encamped by the Yam Suph, which cannot here mean, as before, the Sea of Reeds, but must be used in this verse to indicate the Sea of Seaweeds, or the modern Red Sea ; the double signification of "Suph" or "Soph," as I have before pointed out, making the appellation equally appropriate to the Red Sea as to Lakes Menzaleh and Serbonis, and the probability of a connection between the three having existed in times antecedent to the Exodus, being greatly enhanced by the fact that fossil shells, of a species now peculiar to the Red Sea, have been discovered in the bed of Lake Timsah. Lesser reasons than these, however, would have sufficed to induce the Hebrews to bestow an identical name on more than one piece of water, for in 1 Kings ix, 26, we find them applying the very same term of Yam Suph to the Gulf of Akabah, thus proving that this ancient Semitic race was not so precise in its use of geographical names as our modern English topographers are. The Greeks seem to have been equally vague, and, as Canon Seath reminds us, seeing that Herodotus and other Greek writers carry the name of *ἐρυθρά θάλασσα* to the Persian Gulf, and even confound it with the Indian Ocean, it is not to be wondered at that they should not confine the title of "Red" to the sea now known by that name, but should bestow it also on the Sea of Reeds, which was tinged deep red at the time of the inundation of the Nile by the Ethiopian soil brought down by the Tanitic branch of that river, which flowed through the Yam Suph. The Septuagint, instead of translating Suph, substitutes for it the nomenclature more familiar to the Greeks, and in Acts vii, 36, and Hebrews xi, 29, the Septuagint text is followed.

A. G. WELD.

## WHERE IS CANA OF GALILEE?

By the Rev. W. T. PILTER, M.R.A.S.

(Formerly Missionary in Palestine.)

THE traditional site of the village where our Lord wrought His first miracle has, for the last five or six hundred years, oscillated between Kâna, a ruined village, eight miles, as the crow flies, due north of Nazareth, and *riâ Sefûriyeh*, and Kefr Kenna, a village four miles north-east of Nazareth, *en route* for Tiberias. People at home usually follow Dr. Robinson in taking Kâna to be the authentic site, while those who have visited Palestine are almost certain to have seen Kefr Kenna, though not Kâna, and favour the place they have seen,—a species of vice not confined to travellers.

For reasons which will presently appear, in this matter of Cana of Galilee I am disposed to join the tourists' chorus.

But we have first to settle with Dr. Robinson. He informs us<sup>1</sup> that Kâna was known both among Christians and Moslems only by this name Kâna el Jelîl; while the same name was sometimes applied, by Christians alone, to the village of Kefr Kenna, because, apparently, the monks have taught them to do so. He further reminds us that Kâna el Jelîl is precisely the rendering of Cana of Galilee in the Arabic New Testament. We might add that the same rendering is preserved in the revised Arabic translation of Drs. Eli Smith and Van Dyck, and that it is exactly the equivalent in the modern vernacular of Palestine of the *κανᾶ τῆς Φαλιδαῖας* of the Greek Testament, or קָנָה אֲשֶׁר בְּגַלְּיל of the Hebrew Version of the New Testament. Naturally, therefore, if Kâna el Jelîl were the original native name of the now ruined northern village, it would need very cogent evidence indeed to prevent us identifying it with the Cana of Galilee of St. John's Gospel.

But, so far as I can gather, the only authority Dr. Robinson has for his full name of Kâna el Jelîl was his friend Abu Nâsir, an intelligent Arab-Greek Christian of Nazareth. Against Abu Nasir's statement, that the place "was known both among Christians and Moslems only by this name Kâna el Jelîl," we have the evidence of the Palestine Exploration Fund's map, which shows it only as Kâna, or Khûrbet Kâna. But we have fuller evidence on the subject, and almost contemporary with Dr. Robinson's—that of Dr. W. M. Thomson in the first edition of "The Land and the Book" (p. 425). He says that when on the road from Tiberias "I pestered everybody I could find on the right and the left—farmers, shepherds, Bedawîn, and travellers—with inquiries about the place where the water was made

<sup>1</sup> Robinson, "Biblical Researches" (1st edition), vol. iii, p. 205. In his 3rd edition I see Dr. Robinson omits "el Jelîl" from the name and writes only Kâna."

wine. With one consent they pointed to Kefr Kenna. Some of them knew of a ruin called Kâna, on the north side of the great Plain of Buttauf, but only one had ever heard of the word Jelil as a part of the name; and, from the hesitancy with which this one admitted it, I was left in doubt whether he did not merely acquiesce in it at my suggestion. It is *certain* that very few even of the Moslems know the full name Kâna el Jelil." The evidence now shows that this is only another of the several Kânas which are found in Northern Palestine; the name may be applied to any place where *reeds* grow, as, e.g., to the spring of the little village of Er-Reineh, between Nazareth and Kefr Kenna, which is called (see the Survey map) Ain Kâna.

Although Dr. Thomson's evidence is so important against the identity of the name, he is disposed to adopt Dr. Robinson's identification of Kâna as Cana of Galilee on other grounds, which we have now, therefore, to examine, viz., the evidences of tradition and natural topography.

We will first hear Robinson and his own authorities. He says (p. 205) "that it is only since the sixteenth century that monastic convenience has definitely assigned Kefr Kenna as the site" of Cana of Galilee. Quaresmius (a Latin monk and Papal Commissary, who resided about twelve years in the Holy Land, and whose book was printed 1634-39) "relates, that in his day, two Canas were spoken of among the inhabitants of Nazareth and the vicinity; one called simply Cana of Galilee (Kâna el Jelil), and the other Sepher Cana (Kefr Kenna). . . . He decides, however, very distinctly for the latter place, because of its being nearer to Nazareth, and having some ruins [of a church built to commemorate the miracle]; without, however, as he says, venturing to reject the other tradition. Yet it was probably the authority of this very writer which tended, more than any anything else, to fix attention upon Kefr Kenna, and throw the true Kâna into the shade; for from that time forward the latter is very rarely noticed by travellers. It may be remembered, too, that in the time of Quaresmius, the church and convent at Nazareth were first built up, after the desolations of many centuries; and this circumstance conspired to give currency, among travellers, to the view which the monks adopted respecting Cana."

It appears from this that when, according to Robinson, the monks began to adopt Kefr Kenna as the site of Cana of Galilee, they could point to some old ruins still there commemorating it as the true site; it also appears that for some centuries before this it was not so convenient for travellers to visit Kefr Kenna in consequence of the convent at Nazareth being then desolate.

It may have been that the "monastic convenience" Robinson speaks of had led the monks, when driven from Nazareth, but still maintaining a good footing in Sefûrieh, to fix upon the village of Kâna—so accessible from Sefûrieh, and bearing the name of Cana—as Cana of Galilee. The testimonies Robinson quotes, of travellers earlier than Quaresmius, support this conclusion as much as his own—to wit, Adrichomius, near the close of the sixteenth century; Anselm, about A.D. 1507; and Breydenbach, A.D. 1483;

the first and last of these apparently quoting "earlier writers." "But the most distinct notice of the Cana of those days," says Robinson, "is from Marinus Sanutus, about A.D. 1321" (whose account, however, may have been taken from Brocardus, *circa* A.D. 1280). "In coming from Ptolemais (Akka), he says, the most usual course was to proceed first eastwards to Cana, and thence south, through Sepphoris to Nazareth. All this leaves no doubt that the site of Kâna el Jelîl is here meant. At that time the place was professedly shown where the six waterpots had stood, and also the triclinium where the feast was held; but the whole was in a crypt, or cavern, underground." This piece of evidence indicates pretty clearly that this was but a "show place" for pilgrims devised by the monks. Marinus went the "usual course" of the different sites which were "professedly shown." And it is morally certain that this site was a monkish invention, for the monks are fond of locating the scenes of Bible stories in caves (witness the Chapel of the Annunciation in Nazareth, and that in which the Apostles' Creed was composed on the Mount of Olives); but no Jewish feast, such as that of the marriage at Cana, was ever held in a cave. In the time of Saewulf, about A.D. 1103, there was a monastery "still standing," called the Architriclinium. Now, although Robinson merely mentions this piece of evidence, I confess that it seems to me to be the most striking of all he adduces in his favour. The architriclinium at least testifies that there was already a tradition that in this place the first miracle of Christ was performed. The tradition may not have been very old, but it was there. And where was this place? "Nearly six miles north of Nazareth, on a hill." Both Kâna and Kefr Kenna are on hills, but the former *ten* and the latter a little over four English miles from Nazareth. But an English mile is longer than Saewulf's Roman ones, and this difference would make Kefr Kenna nearly *five* miles and Kana *eleren miles from Nazareth*, and, therefore, Saewulf speaks evidently of Kefr Kenna, and clearly not of Kâna; moreover, he apparently saw it just before the traditional site was changed, "to suit monastic convenience," to Kâna.

The only remaining definite witness Robinson calls to support his view is St. Willibald, who visited Palestine in the eighth century. But St. Willibald's evidence is as follows:—"And having there (*i.e.*, at Nazareth) recommended themselves to the Lord, they proceeded to the town of Cana, where our Lord turned water into wine. A large church stands there, and near the altar is still preserved one of the six vessels which our Lord commanded to be filled with water to be turned into wine; and the travellers drank wine out of it. They remained there one day, and then continued their journey to Mount Tabor,"<sup>1</sup> thence to Tiberias, Magdala, Capernaum, Bethsaida, Chorazin, and Dan. The route given is vague from its brevity, but the "Cana" manifestly suits Kefr Kenna rather better than Kâna. Indeed, if Kâna were meant Willibald must have also seen Sefurieh *en route*, an important place to pilgrims, with a cathedral which, according to the tradition of at least two centuries (*i.e.*, from the time of Antoninus

<sup>1</sup> T. Wright's translation of Willibald, in "Early Travels in Palestine," p. 16.

Martyr), was built on the spot where the Virgin Mary received the salutation of the Angel ; yet Sefurieh is not referred to by Willibald in the remotest way ; we thence infer that he did not see it, and therefore did not go to Kâna.

Before we come to the evidence of the Scripture period it may be well to have a description of Kâna before us. According to Dr. Thomson, "a careful examination of the site (of Kâna) led to the conclusion that there were never more than fifty houses in the place. . . . There are some ancient cisterns about Kâna, . . . but no fountains or well," —and hence it must always have been even more insignificant than Nazareth, which possesses its own spring. It would thus have been remarkable indeed if an inhabitant of Kâna had said, as Nathaniel of Cana of Galilee said, "Can there any good thing come out of Nazareth ?"

There are two other arguments of some, though not of great weight in deciding against Kâna. The first is, whence came the water to fill "six waterpots of stone, . . . containing two or three firkins apiece?" It may have been there "a practice" to keep "water in large stone pots, each holding from eighteen to twenty-seven gallons,"<sup>2</sup> but those at the feast in question were empty, and filled at the command of Jesus. Now 130 gallons or so might have been easily enough obtained at that period of the year, apparently spring-time, from a spring such as that of Kefr Kenna ; but one might have expected the villagers of a little place of not more than fifty houses to have raised some objection to such a quantity of water being carried off at once from a common *cistern*. The second difficulty is one of travel. Cana of Galilee was reached on the "third day" (John ii, 1), after leaving the Baptist at Bethabara (John i, 28). Assuming Bethabara to be the same as Beth Nimrah, this would be eighty miles distant from Kefr Kenna—a sufficiently long journey to be accomplished "on the third day" without adding five or six miles.

One argument, which I confess has always weighed much with me in favour of Kefr Kenna, is the naturalness of its position in the Galilean circuit,—whence, so far as we have any evidence, all the disciples seem to have come (excepting only the one from Judea, the traitor), and also the natural way in which all the New Testament references to Cana of Galilee fall in with this site. Kefr Kenna is on one of the two ordinary routes from Nazareth, "where He was brought up" to Capernaum, where He afterwards took up His abode ;—it is thus on the road to the Mount of Beatitudes and the Galilean Lake. It seems natural, therefore, that Philip of Bethsaida should have a friend dwelling at Kefr Kenna ; and Capernaum might be a common meeting-place for the disciples, as it would be "the city" at that time to Kefr Kenna and Bethsaida, but not to Kâna. This idea receives some confirmation from all the New Testament references to Cana, as, e.g., from the fact that when our Lord, leaving Judea, was welcomed

<sup>1</sup> "The Land and the Book," vol. ii, p. 308, new edition (1883).

<sup>2</sup> Dr. E. D. Clarke's "Travels," quoted by Canon Westcott in the "Speaker's Commentary" on St. John.

into Galilee, He stayed again at Cana, and the centurion of Capernaum, hearing that He had come "into Galilee," went to Jesus, perhaps expecting to find Him in His own city of Nazareth; but while on his way thither found Him at Kefr Kenna, through which He would naturally pass *en route* for Nazareth.

We must bear in mind another fact, which we shall have to make more use of immediately, namely, that, so far as appears, there never was any thoroughfare passing *Kâna*,—nothing but a bye-road which ended with the little village, while Kefr Kenna has always been on a much used thoroughfare, as well as in proximity to the Roman road, and so, humanly speaking, well adapted as a missionary centre of the Great Teacher.

We come, lastly, to the evidence of Josephus,<sup>1</sup> who appears to describe Cana as Cana of Galilee to distinguish it from Cana in Cœlosyria. The requirements of Cana of Galilee, as referred to in his "Life" (§ 16), would be most satisfactorily met by Kefr Kenna, as its situation would enable him to keep an eye on both Sepphoris (Sefurieh) and Tiberias at the same time; while one cannot see how an out-of-the-way village, containing not more than fifty houses, and a limited water supply, could have accommodated Josephus and his soldiers. So, again ("Life," § 71), *Kâna* was too insignificant and obscure to be specially watched by a Roman army. Finally, it would really appear too absurd of Josephus to ask to believe ("Wars," I, xvii, 5) that the "headquarters" of Herod the Great were at a village called Cana" (of Galilee, § 3), if that village could count scarcely fifty houses, little water, and no proper road!

To sum up. First, Dr. Robinson's chief argument of the identity of name of his *Kâna* and Cana of Galilee, upon which he might trust if it were real, is shown on examination to be untrustworthy. Secondly, the evidence of tradition is not in favour of *Kâna*, but of Kefr Kenna, except just enough to show that at a particular period "monastic convenience" temporarily shifted the site from Kefr Kenna to *Kâna*; that it was a monastic device being further testified by the fact of a cave being resorted to. Thirdly, that *Kâna*, from its obscure situation, its smallness, and deficient water supply, fails to meet the requirements of the Cana of Galilee of the New Testament and of Josephus, while Kefr Kenna fulfils all the conditions.

One difficulty remains to prevent us absolutely identifying Kefr Kenna with Cana of Galilee; it is that of *name*. The difficulty is, not that it has lost or changed its old name, for this is quite a common thing in Galilee; witness, e.g., Bethsaida, Gath Hepher, Mount Tabor, and the Plain of Edraelon or Jezreel, and in Judea of Emmaus—to mention just one place which Mrs. Finn has lately discussed with so much lucidity and force in these pages. The difficulty is that *all* the Syriac versions insert *t* before the *n*, and read *Kotnâ* or *Kotneh*, which, as Canon Westcott says, may point to local knowledge; for the Syriac was the vernacular version of Palestine probably from the second century of our era. The meaning of the Syriac word, however, gives us no clue to the place. Could any village

<sup>1</sup> "Antiq.," XV, v, 1; "Life," §§ 16 and 71; "Wars," I, xvii, 5.

or ruins be found in the proper quarter called Kotna, the question might be set at perfect rest ; but neither the Survey map shows us such a place, nor does any ancient traveller speak of one. What, then, shall we conclude as to Cana of Galilee ? Why surely the same as the Arabs before us, that it is Kefr Kenna<sup>1</sup>—The Village which has Changed its Name indeed !

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### THE HOLY SEPULCHRE.

I HAVE read with great interest Captain Conder's paper in the April number on the discoveries at what is called "Jeremiah's Grotto." I know the ground well, having both in 1872 and 1875 camped close to the place ; in 1872 I studied carefully the so-called "Holy Sepulchre," and was convinced it had no true grounds for the title. With my friend Tyrwhitt Drake and Bishop Gobat I often discussed the position of "Calvary." They believed that its position must have been on the northern side of the city, at or about a knoll which overlooks the Valley of Jehoshaphat, and close to the northern road (not far from Jeremiah's Grotto). I painted a picture of the spot in 1872, which was exhibited in London, and engraved in the *Graphic*, with a short notice propounding the idea that *that* was the true site of "Calvary." I give up my idea of that site for Captain Conder's, which is close by, and am only glad to find I was on the right track.

There is a passage in the Gospel of Luke of great importance, xxiii, 26 : "Simon, a Cyrenean, *coming out of the country*," marks, I think, the position of Golgotha.

There are four great roads coming into Jerusalem :—

That from the *south—the Hebron road.*

That from the *west—the Jaffa road.*

That from the *east—the Jericho road.*

The last, the *north road*, "*coming out of the country*," coming from Galilee, Samaria—from the very heart of the country. Luke is always so exact in his descriptions, that I think his expression proves that Golgotha was on the *northern side*, and being "*nigh to the city*," and "*without the gates*," is an additional proof of the soundness of Captain Conder's view.

HENRY A. HARPER.

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<sup>1</sup> From كفر a village, and حنا to signify by an improper or changed name (as, e.g., by a surname).

## THE EXODUS.

AMONG the four or five papers on the Exodus in your last *Quarterly Statement*, I am greatly pleased at the contribution by Mr. C. Pickering Clarke. He accepts, at page 23, as distinctly even as I have done myself, what I have so long contended for, viz., that the fifth and sixth Anastasi papyri are distinctively papyri of the Exodus : that is to say, that masses of Semitic people are described therein as flitting backwards and across the scene. Mr. Clarke (p. 23), talking of the marshy country east of the fortress set up by the Regent Hotep-hi-ma, or Bai-n-Ra, says, "The administration of the eastern marshes is clearly set forth in the Egyptian papyri, having its bureau at the royal city Pi-Rameses ; and the foreign people again were under the control of regularly appointed officers of their own, who were responsible, we may suppose, to the central government of the country."

The reason, however, why I can hardly quite agree in this flowery description is that when the Semites rose in insurrection, the government was no longer central, but anarchical. Both Rameses II and Seti II died blind (see Pliny, Herodotus, and Diodorus), and practically everything fell into the hands of the great regent Bai-n-Ra, who died tributary to the Hittites, and thus eventuated the Exodus. Unfortunately, to the best of my knowledge, only two people in England would be able to read off Hieratic. There may be others, of course. Let them tell us, yes or no, was the military earthwork Tabnet cut out in twenty-three days, or was it not ? Was it or was it not dug out avowedly for the accommodation of the foreigners in the temple of Nebt-hotep ? Was or was not a four days' journey arranged for the Semites ? Were 178 royal robes given or loaned out by Egyptian officers to the foreigners for the occasion ?

These things are not quite clear, and it is curious that from about the middle of the papyrus (6th Anastasi) the Regent and his friendly Shasu are brought forward from Edom. Perhaps it is a symptom of the last struggle that poor old Seti sent down an architect from Thebes to put things right. Truly, however, let us allow he was probably the greatest architect that this world has ever known, viz., Bek-n-Chonsu.

DUNBAR J. HEATH.

*Esher, Surrey.*

## VARIETIES.

I WISH to point out one or two points in Captain Conder's recent observations :—

1. In incorrectly saying (1883, p. 102) that I seem to identify *Ephron* with *Ephrath*, he has confused the former name with

*Ephraim.* This name (52) may easily have taken the place of *Ephrath*, by the final נ being altered (as I said) into י.

2. *The Garrison* (1883, p. 101). Samson's last exploit was breaking Philistine pillars. But that Jonathan's first had to do with pillars erected by the Philistines is an idle fancy on the part of Captain Conder. If he is satisfied about the rocking of the *pillar*, what is meant by "Both of them *discovered themselves unto the pillar* (!) of the Philistines?" (1 Sam. xiv, 11.) Should the grammar allow the words in xiv, 15, to be rendered "all the people of the *pillar*," the lexicon certainly will not, since the word מִצְבָּה, used seven times in this episode, never means a "pillar." It is an entire mistake to say "it is rendered 'pillar' in other passages of the Old Testament."

3. *Gath* (1880, p. 216). Captain Conder made a strange mistake when he said that I had "fallen into the same error with Mr. Saunders in supposing the *Gh* or *Ghein* to represent the Hebrew Gimel." Apparently he overlooked the small but important word *if* at the beginning of the sentence.

W. F. B.

## THE TOMB OF DAVID IN THE CITY OF DAVID.

If Captain Conder be right (N.B., I do not for a moment believe that he is) in his identification of the Tomb of Nicodemus (so called) with "the monuments of the Kings of Judah" (1883, p. 73), including the Tombs of David and Solomon," then this is certainly the grandest discovery yet made at Jerusalem.

Mr. Fergusson in 1878, having four ill-sorted kings to dispose of, made them up into one lot and said ("Temples," p. 56), "These four may have been buried in those sepulchres always known to have existed under the western boundary of the Church of the Holy Sepulchre." Captain Conder, always striking, but sometimes missing the mark, seems to have seized on these tombs for a nobler object, and says in the "Handbook" (p. 342), "It seems quite possible that the Church of the Holy Sepulchre preserves the monument of the nine chief kings of Jerusalem."

This "possible" of 1879, developed into "hope to show" in 1882 (*Quarterly Statement*, 157), and has now in 1883 culminated, "after ten years of study," in a "fact" (!!). Surely error grows apace.

Since 1877 I have believed that the Tomb of David was on Ophel (so called), and as the newly discovered aqueduct clears up the Siloam mystery, I do not hesitate (after groping awhile in the dark) to assert that the tomb is on that hill somewhere between Siloam and the Virgin's Fountain. Since 1878 it has been patent to me that the City of David was solely and

entirely on Ophel so called. Accordingly, I now invite, challenge, and defy anybody, from the river to the ends of the earth, to upset this conclusion.

Yet in self-defence I must demolish Captain Conder's "fact," by showing—

- (1) That his process of reasoning is defective, even if the evidence he produces be trustworthy ; and
- (2) That this evidence is either not trustworthy, since it is contradictory, or else it is obviously untrue, since it contradicts the Bible.

Captain Conder's case seems to be this :—

1. David was buried in the City of David.
2. The tombs named are the only ancient Jewish sepulchres visible in Jerusalem.
3. These tombs have some peculiarities, and so had the Sepulchre of David, according to Josephus.
4. Therefore it is a *fact* that these sepulchres represent the Tomb of David.

A parallel case will show how inconclusive is an argument like this. For instance :—

1. Goliath was killed by a stone in the Valley of Elah.
2. The only stone now visible to me was once in Wâdy es Sunt.
3. This stone has peculiarities: *e.g.*, it is smooth and was taken to Jerusalem; the stone (1 Sam. xvii) was also smooth, and may have been taken to Jerusalem while still embedded in Goliath's head.
4. Therefore it is a "fact" that the stone before me killed Goliath.

Unfortunately for the interest of my museum the same might be said of many a stone gathered out of the brook, and similarly many a tomb discovered in Jerusalem might be declared to be the Tomb of David. This kind of argument is of no value whatever.

Next as to the character of the evidence. In the "Handbook" (p. 341) it is said, "From the Talmud we learn that all tombs were outside Jerusalem, except those of the family of David, and that of the prophetess Huldah." From this it might seem that Captain Conder was supported by the authority of the Talmud (whatever that may be) in saying (1880, p. 102), "It (*i.e.*, the Tomb of Nicodemus) is the only undoubted Jewish tomb in Jerusalem." It is added, however (p. 341 *supra*), "Although it was not considered certain whether some 'tomb of the depth' or hidden sepulchre might not exist unknown beneath the surface" (Parah. iii, 2). Captain Conder has further given (1877, p. 134) several passages from the Mishna to the effect that "sepulchres dating from an early period existed within the walls of Jerusalem." One passage is very curious, viz., "All the sepulchres within Jerusalem were transferred outside the walls except those of the family of David and of the prophetess Huldah." This is the passage of the Talmud referred to above, the truth of which seems to depend on some *sepulchres* (!) having been transferred to outside the walls. Josiah transferred ashes from Jerusalem to Bethel; we moved bones from

Bethel to Sidon ; but who, except an American, would transfer a sepulchre ? If the Talmud proves anything, it is that there were other tombs in Jerusalem besides the royal sepulchres. But, if there were others, why must the only one we can now see be of necessity the Tomb of David ?"

Instead of delaying over the peculiarities to which I have already objected (1880, p. 167), it will suffice to show that the tomb claimed as that of David cannot really be such, since it is at least half-a-mile out of its proper place, though it must be admitted that the power which could transfer sepulchres outside the walls could undoubtedly alter their position within.

David was buried in the City of David. Captain Conder claims that the part near the Holy Sepulchre was the City of David because this part, "according to the majority of authorities, is the site of the Akra of Josephus, and Akra, according to LXX, was Millo, and Millo was in the City of David." I readily admit that the Akra of Josephus was on the site of the City of David. But have we really come to this, that the site of Aera is to be settled, not by argument, but by the votes of a majority ? Surely not.

Josephus identifies his Aera with the Aera of Maccabees, which was the City of David (1 Macc. i, 33). The question then is, where does Josephus put Aera ? I answer, "Solely and entirely on Ophel so called, just where the biblical evidence puts the City of David."

The evidence that Josephus places Aera, or the Lower City, on A, the hill south of the Temple, and not near B, the Holy Sepulchre, is as follows :—

1. Jerusalem stood on two hills, those of the Upper City and Aera, and was defended where necessary by *three* walls. Aera at B would be defended by *two* only, while Jerusalem would in this case stand on *three* hills, viz., the Upper Hill, A, and B.
2. These two hills had deep valleys on the outside. Aera at B would have no deep valley on the outside.
3. Josephus repeatedly gives the title of Aera, or the Lower City, to A, but never to B, which he describes as "the suburbs."
4. In 15 "Ant.," xi, 5, the first-named gate was one near Wilson's Arch; the one leading to the other city, by a great number of steps into the valley, &c., was one at Robinson's Arch, while the deep valley along the entire south quarter of the city is the valley south of the Upper City. If it is urged that the gates are here named in *strict local order*, then there is the following crushing reply.
5. In 4 "Wars," ix, 12, much more must there be local order in the description of the four towers. One of these was at the north-east corner of the temple, another above the Xystus ; the "third" at another corner over against the *Lower City*. This must obviously be the corner near Robinson's Arch, which was thus over against Aera. To the advocates of "local order" it is left to escape from their own dilemma.
6. In 5 "Wars," iv, 1, the *third* hill (*i.e.*, the Temple) was parted by a

broad valley from *the upper city*, and not from Aera. This valley was filled up in the line of Wilson's Arch in order to join the *Upper City* to the Temple.

7. Aera is said to be *ἀμφίκυρτος*. This word means *gibbous*, or *with sloping sides*, but not "in the form of a *crescent*," as Captain Conder describes B.

The placing of Aera of Josephus anywhere else than south of the Temple is one of the most remarkable errors to be found in literature.

It has arisen apparently from two *false* statements on his part : (1) that the Aera was originally higher than the Temple. To suit this notion he deliberately altered the *went up* in 1 Macc. vii, 33 into *came down* (!) in "Ant." 12, x, 5 ; and (2) that the Aera was levelled by Simon. This exploit is not so much as mentioned in 1 Macc., and is indeed in direct opposition to two passages in that book (xiv, 37 ; xv, 28, 33-35).

Thus there is not a spark of evidence that Josephus puts Aera at B ; all the evidence in the "Wars" puts it at A. Captain Conder has yet to show that the City of David was near the Holy Sepulchre.

Suppose, however, that the City of David was at B. Captain Conder also says the Upper City formed part of the City of David, because Josephus in his "Wars" says David named the Upper City *φρύνιον*. (Here Josephus makes another *wrong* statement, which he afterwards honestly corrects in 7 "Ant." iii, 1, where he names the citadel of the Jebusites *ἄκρα*). And further, Captain Conder admits that "the sepulchres of David" (Neh. iii, 16) were on Ophel, but says that we are not to understand that David was buried in this part, but that these were in "the field of the burial of the kings" where Uzziah was buried. It has, however, been twice pointed out (1881, pp. 95, 327) that the Bible states that Uzziah was buried "in the City of David."

Therefore, while Captain Conder is both forced to allow, as the consequence of his own statements, that the City of David took in the three parts, A, B, and the Upper City, and while he maintains that the field of the burial of the kings was in A—*i.e.*, that there were old Jewish tombs in A—he still most inconsistently and strangely (without excavating all over *the three*, or even taking a peep at the tombs in A, whose former existence has been acknowledged) propounds as a *fact* the impossible theory that the Tomb of Nicodemus is the Tomb of David.

Webster states that some *facts* are *false*. Surely this must be one.

The evidence that Zion, the City of David, was solely and entirely on Ophel (so called) seems to me simply irresistible.

In Nehemiah we have (1) David's sepulchres ; (2) David's house, and (3, 4) the stairs of the City of David (iii, 15 ; xii, 37) all placed on Ophel. Those who reject this position either ignore iii, 16, or contradict themselves.

In 2 Chronicles xxxiii, 14, we have (5) the City of David placed on Ophel, because a wall on the west side of Gihon (*i.e.*, Virgin's Fountain) in the valley (*nachal*, *i.e.*, the Kidron ravine) is described as outside the City of David. This would be absurd if the latter did not stand on Ophel.

In 2 Chronicles xxxii, 30, the water from Gihon being carried through the hill to Ain Silwân, is said to be brought straight down to the west side of the City of David ; this (6) places the latter on Ophel. The words, however, may perhaps admit of being translated *westwards to* the City of David, as if the Upper City were intended. Since, however, the Valley of Hinnom was on the south side of the Jebusite (*i.e.*, of the Castle of Zion), and this valley has been proved to be that reaching from the Jaffa Gate by Robinson's Arch to Siloam, it is quite impossible for the Upper City to have been the *Castle* or City of David, as the Valley of Hinnom would thus be on its *north* and not on its south side (1882, p. 55).

In Psalm xlviii, 2, as expounded by the Rabbis (whom Lightfoot curiously misunderstands), *Mount Zion* (*i.e.*, the Temple, as in 1 Macc.) is described as on the *north* side of the city of the great king, *i.e.*, the City of David. This passage (7) places it on Ophel. A single direct statement in the Bible would be quite enough to settle the position of the City of David. We have, however, not merely *one* but *seven*, all consistent with one another, and *five* of them applicable only to a position on Ophel so called. Further, 1 Macc. distinctly means by Mount Zion the Temple on the eastern hill, and places Aera, or the City of David, near it, but at a lower elevation, which suits Ophel (so called) exactly ; and here alone, as we see, Josephus puts his Aera.

Unfortunately this inaccurate writer has been too implicitly trusted, and due regard has not been paid to one important point, viz., that while in the historical parts of the Bible Zion means only the City of David, it may also mean in other parts either the Temple (*i.e.*, the Mount of Zion of 1 Macc.) or even Jerusalem in general. In deference to Josephus, the City of David has by some been taken to mean Jerusalem as a whole ; while the Bible is most precise in its use of these terms, showing thereby that they are not convertible. For instance, more than twenty times it is said of one or another king that he *reigned in Jerusalem*, but was *buried in the City of David*.

Controversy about the position of this famous spot is now as good as dead. The site on Ophel will of course by some be contradicted, but he must be rash indeed who ventures to give his reasons for rejecting it.

As it has long been admitted that four statements in Nehemiah certainly seem to place the City of David on Ophel, no apology appears to be needed for maintaining with the utmost possible confidence that the correct site is that which the Bible itself points out.

Two deeply interesting questions remain—(1) Why was the castle of Zion built on the lowest hill at Jerusalem ? and (2) In what precise spot are we to excavate in search of the Sepulchres of David ?

W. F. BIRCH.

## THE ENTRANCE TO THE TOMB OF DAVID.

THE Sepulchres of David are mentioned in Nehemiah iii, 16, in such a manner that in *Quarterly Statement*, 1877, p. 199, it seemed to me certain that they were excavated on Ophel (so called). I have never since that time doubted this point.

It was desirable, however, to point out their probable position on that hill, and this was a difficult question, as it depended upon the position of the *Pool of Siloah*, and the pool that was made, between which two Nehemiah iii, 16, obviously places them.

In *Quarterly Statement*, 1877, p. 202, I gave the reasons which seemed to compel me to identify these two pools with the two Pools of Siloam of the present day. This conclusion required me to place the Sepulchres of David on the southern extremity of Ophel. I afterwards (1879, p. 178) *distinctly abandoned* this position for the following reason. Accidentally it became clear to me that the City of David was solely and entirely on Ophel and that for Isaiah viii, 6, to have any meaning the waters of Shiloah (1878, p. 188) must have had to do with the Virgin's Fount. As, however, I rightly failed to see that the rock-cut tunnel to 'Ain Silwân existed in the time of Ahaz, it seemed impossible to apply to the same locality *all* the various passages where Shiloah, Siloah, and Siloam occur in the Bible and Josephus. In pardonable ignorance of the true explanation (*supra* 106), I was forced to disunite these names, and *assumed* a position for the Pool of Shiloah a little south of Robinson's Arch, and to avoid some difficulties, which need not now be specified, I placed *the pool that was made* at the present upper Pool of Siloam. On the further *assumption* that the Sepulchres of David were in the *malaki*, it was shown on a plan (1881, p. 99) where they ought to be looked for.

The true solution of the Siloam difficulty at once upset this my *second* position. Baffled, but not disheartened, I have at once to begin afresh. Experience and time have, however, taught me something. One may be certain now that 'Ain Silwân very fairly represents the position of Siloah ; the city of David was on Ophel ; the watergate (Neh. iii, 26) need not have been near the Virgin's Fountain ; while either here or more to the south on Ophel, but certainly not at the lower Pool of Siloam, we *must* fix "the pool that was made." The King's pool was, in all probability, the present lower Pool of Siloam. I venture now on a *third* site for the entrance to the Tomb of David. It seems to me to be within an area 450 feet long, by 50 broad, one longer side coinciding with the track along the ridge of Ophel, and its breadth reaching about 40 feet down its eastern side. The southern end of the area is about halfway between the Virgin's Fountain and 'Ain Silwân. Good reasons for this position I hope to give in the next number.

W. F. BIRCH.

**THE NAMELESS CITY, AND SAUL'S JOURNEY TO  
AND FROM IT.**

I SCARCELY like to intrude into the discussion of a matter confessedly so perplexing, but knowing how much the Rev. W. F. Birch values the *expression* of different views, I do venture to ask his consideration of the following points, which have suggested themselves to me in studying his paper on "The Nameless City" in the January *Quarterly Statement*. I must ask him and you to pardon me if, from any want of knowledge of what the learned have written on this subject, I seem to be endeavouring to bring to life the "thrice slain."

In regard to Saul's journey, his starting-point is not mentioned in the narrative, but we are told that having "passed through" the hill-country (*Mount*, A.V.) of Ephraim, the land of Shalisha, the land of Shalim, and the land of the Benjamites, they then "came to" the land of Zuph. It was when they thus "came to" it, contrasted with the expression used before, that they had "passed through" the land of Shalisha, &c., that the Nameless City was near.

Does not this show that the city, if it was *in* the land of Zuph, was only just over the border?

Surely, too, 1 Sam. ix, 4, shows that the "land of Zuph" was not *in* the "land of the Benjamites," which they had "passed through," and if we may take the "land of Benjamin" as equivalent to the "land of the Benjamites," then verse 16 shows that the *city* was not *in* the "land of the Benjamites" or of Benjamin, for the Lord had told Samuel that he would send him a man "*out of the land of Benjamin*."

May not this verse simply mean (taken in connection with the route named in verse 4) that the "land of Benjamin" was the last district Saul had passed through, and not necessarily that it was that whence he originally started?

In regard to his journey after leaving Samuel, does not chapter x, 13, 14, show that the *Gibeah* (the high place) to which he came, called in verse 5, A.V., the "Hill of God," was *not* the place whence he started, seeing that in verse 14, and again in verses 15, 16, Saul's uncle is prominently referred to, but there is no mention made of his father? Might not the absence of all mention of his father indicate that Saul did not then return to his father's city? or must we suppose that verse 14, &c., refer to his visit to Gilgal, as commanded in verse 8, and that this was subsequent to his return home?

Is it possible that the Gilgal of verse 8 was the same as the Mizpeh of verse 17, &c., where Saul was chosen by lot? (See also chapter xi, 14.)

As to Saul's *destination*, chapter x, 26, tells us that "Saul went home to Gibeah." Are we not justified, then, in considering *this* to have been his *father's city*, whence he started to seek the asses, and the same place to which chapter xi, 4, says the messengers from Jabesh Gilead came to Saul after he had been chosen king?

Why does Mr. Birch prefer the *Beit Jâla* hill to Beit Sahur, which Mr. Trelawney Saunders gives in the Old Testament Map as the position of Ramah and Ramathaim-zophim?

In 1 Sam. i, 1, the *same name* is given to the country with which Ramathaim-zophim is in some way connected, as that of the first region Saul and his servant searched for the lost asses. Would Mr. Birch suppose the reading in verse 4 of chapter ix to be an error also?

Whatever may be the precise meaning of the whole of verse 1 of chapter i, verse 19 shows that Elkanah was living at Ramah before the birth of Samuel, while verses 21, 22, and verse 11 of chapter ii, show, I think, that the infancy of Samuel was certainly passed at Ramah; consequently No. 2 of Mr. Birch's "explanations" on page 52 cannot hold good.

The whole difficulty seems to arise out of chapter x, 2.

I should, therefore, like to ask Mr. Birch's opinion of the admissibility of the reading which Mr. Shapira, in the "Athenaeum" of August 5th, 1882, says is that found in an Arabic Commentary of which he is there treating.

Mr. Shapira gives it thus (I add the opening clause): "When thou art departed from me to-day thou shalt find 'at Zelzah, in the border of Benjamin, two men *from* Rachel's sepulchre,'" &c.

Taking this reading, might not the easiest mode of reconciling *all* points be to suppose that "the Nameless City" of chapter ix = Ramah of chapter i, 19, and chapter ii, 11 = Ramathaim-zophim of chapter i, 1, while situated *near* the land of Zuph, was yet in the hill country of Ephraim, and, in fact, was the Ramah mentioned in Judges iv, 5, 6, comparing especially with this passage 1 Sam. x, 3, where both Bethel and Tabor are mentioned?

I have not had time to work out Saul's home route in accordance with this supposition, but I should like to know from Mr. Birch if there is any insuperable objection to it.

H. B. S. W.

In regard to the points raised by H. B. S. W. I would observe—

(1) That it seems to me that the city was certainly in the land of Zuph, and (whether in or outside Benjamin) close to the border.

(2) I am not sure that 1 Sam. ix, 4, proves that the land of Zuph was not in the land of Benjamin, nor am I sure that ix, 16, makes it certain that the city was outside Benjamin. This point raised by H. B. S. W. is important. I have not seen it anywhere argued out, but if it can be satisfactorily made out, it will be a clear gain to have it established that the city was outside the tribe of Benjamin.

We have a similar difficulty in regard to the Cave of Adullam. David's parents dwelt with the King of Moab all the while that David (1 Sam. xxii, 4) was in the *hold*. There would have been no need for their doing so, if the hold had been in Moab. Therefore we conclude it was not in

that country, but identical with the *hold* named in connection with the Cave of Adullam (2 Sam. xxiii, 14).

If this cave was either near the city of Adullam (Josephus, 6 "Ant." xii, 3, but not 7, xii, 4; 7, iv, 1), or in Wâdy Khureitun (as tradition seems to me rightly to maintain), then the *hold* was certainly within the tribe of Judah. But if to David (1 Sam. xxii, 5), while he was (strictly speaking) in the land of Judah, it could be said, "Abide not in the hold; depart, and get thee into the land of Judah," there is no reason why to Samuel, living at Ramah in the land of Benjamin, it might not also be said, "I will send thee a man out of the land of Benjamin." If this argument is deceptive, perhaps the fallacy will be pointed out.

It seems, however, to me that (a) it is quite possible that, if Ramah was on the border of Benjamin, but still within it, a person might be said to have gone through the land of Benjamin when he got close to it; and that (b) with Ramah so placed within Benjamin, a person might still be said to be sent to Ramah from the land of Benjamin; and (c) that as the boundaries of the tribes were not always strictly observed (Joseph or Ephraim seized Bethel, which was really in Benjamin, Judges i, 22; Josh. xviii, 22; 1 Chron. vii, 28), it is quite possible that Ramah was, strictly speaking, in the territory originally allotted to Benjamin, and yet had become alienated to the Kohathite Levites or to Judah. On this point I wish to keep an open mind, and when it is made out I shall cheerfully give up Beit Jâla as Ramah, since the position of Rachel's Sepulchre seems to me certain; and with this point fixed, the waters of Nephtoah must be the springs near Solomon's Pools; and after this I do not see how originally Beit Jâla can have escaped being in Benjamin, if the boundary is drawn in a reasonable manner. Further, against this view it is a common thing in Hebrew for the narrative to go back (Judges xx, 35, 36; 1 Sam. xx, 22), so that 1 Sam. ix, 5, may relate what happened in the land of Zuph, even while this was the very part where they finished going through the land of Benjamin.

(3) I think Saul started from Gibeah, but I do not see that the precise point of departure affects the position of the other places. Kish, who seems at this time to have been rather nervous (ix, 5; x, 2), might easily be lost sight of behind Abner, like Bethuel behind Laban (Gen. xxiv, 29, 50), though the cases are not quite parallel.

(6) I think Saul's care for his father would make him go home at once.

(7) Hardly. "Go down to Gilgal" (x, 8), and the position of Mizpah at Neby Samwil seem to forbid the identity of the two.

(8) I believe Saul's destination was Gibeah (of Saul), within a mile of Kh. Adasah, east of Gibeon.

(9) I object to Beit Sahur as being Ramah because, first, Mr. Saunders' route, drawn through the desert from Jericho, is *all but entirely through Judah*, and not Benjamin (1 Sam. ix, 4); and next, if Mr. Saunders chose to change the route to one from the west, then 1 Sam. ix, 5, &c., does not seem to me to allow of Saul having passed (close to) Bethlehem, which he must have done to get to Beit Sahur.

(10) No.

(11) I do not see that the objection is sound. Elkanah certainly lived at a Ramah (1 Sam. i, 19), called Ramathaim-zophim in 1 Sam. i, 1 ; and next, Samuel (as it seems clear to me) met Saul at a Ramah, which was not in Mount *Ephraim*, but south of Jerusalem. If Mount *Ephraim* is still to stand in 1 Sam. i, 1, then it seems to me explanation (2) is possible, though I reject it, because moving from one Ramah to another seems far more improbable than a slight alteration of the text.

(12) Mr. Shapira's reading no more commends itself to me than his pottery. "Rachel's Sepulchre" does not seem to me a likely name for a village.

(13) The proposal to identify Samuel's Ramah with the Ramah of Judges iv, 5, seems to me open to grave objections. Ramah (Judges iv, 5) is commonly taken to be Er Ram, and rightly so, I think. 2 Sam. xx, 1, 21, shows that part of Mount Ephraim was in Benjamin. It seems unnecessary, therefore, to look for another Ramah besides Er Ram near Bethel. With Er Ram (in *Benjamin*) for Samuel's Ramah, the objection about the city not being in Benjamin directly clashes, and he must abandon one of his two proposals. The *real* objection, however, is that Saul did not know Samuel by sight, while Er Ram is certainly within three miles of any possible position of Gibeah of Saul (his home).

*May 22nd, 1883.*

W. F. BIRCH.

P.S.—If there had been a high hill between Bethlehem and Solomon's Pools, and near it old tombs, and a well or cistern in the valley on the west side, then I should have preferred this position to Beit Jâla, and H. B. S. W.'s point would be satisfied.

## WELSH CROMLECHS NEAR BARMOUTH.

ALLOW me to give a brief account of some cromlechs near here. They are at "Dyffryn" ("valley," or "plain"). They stand on the slope of a hill on the right of the road from Barmouth. This hill slopes towards the sea, and south-west. The hill is uncultivated—a waste covered with scanty gorse bushes and brambles; a small but strong spring runs down the slope, and near the cromlechs. There are two, one larger than the other common to both, a large flat stone is supported on several upright stones; these last are mere wedges, or slabs of unequal shape. The flat stone which rests on them is much thicker. I could see no tool marks anywhere; the strata of the rock showed all over; it would be easy to pass under the large upper stone and the lower floor. The floor had in the centre a small flat slab, laid level, though the upper slab of the smaller cromlech sloped to the south-west, and the upper slab of the larger one sloped to the north-east. Near these cromlechs are circles of rude stones, piled in heaps; their number and

their order (extending up the hill and round the cromlechs) show that the arrangement was not accidental. Some short distance away, on higher ground, in a rude road or trackway, is shown a flat stone, on which there is a supposed footprint, called *Llan Maria* ("Mary's Step, or Stride"). The impression is about natural size. The tradition is that "Mary" put her foot on this rock, and then strode to the lower hill, a hill lying below, called *Bwlch Gau* ("the false hill"), which is covered with roots of *oak* trees. Remains of an old "altar" are said to have existed here quite recently, but are now removed. A trackway leading to this hill is called *Hwylfa'R-Lwyn* ("the Grove Lane").

More than a mile away is a cromlech, called *Coetan Arthur* ("Arthur's Quoit"), the tradition being that this was a stone "Arthur" threw. On this stone are the reputed marks of "Arthur's" fingers.

Cromlechs and stone circles abound at this place ; on the hills are found *Maen-Hias* (*maen*, "stone;" *hia*, "long" or "erect"). Lower down, and near a village, there are two maenhirs, one a very fine one ; the tradition is that the smaller goes round the larger when it hears the church bell.

I was much struck by the walls dividing the fields on the hills near the cromlechs and footprint. The enclosures are much smaller than the usual Welsh fields ; the coast-line, with its sandhills, its plain, and then the deep blue sea, bright blue sky, and sunshine above me, so brought back to my mind the coast-line from Jaffa to Acre, that the thought occurred to me that these cromlechs, stone circles, and walls were the efforts of a people, immigrants from that Eastern land, trying to reproduce in the land of their adoption the aspects of the old home.

To sum up, we have, first, cromlechs so resembling those of Moab, that the published plate of that one at 'Amman would pass for a fair representation of those at Dyffryn. Secondly, the circles of rude stones piled in heaps. Thirdly, the footprint on the rock, and that, like the Eastern legend, a FEMALE foot. Fourthly, the finger-print—"Arthur's Fingers,"—the MALE hand ; Eastern legend again. Then the spring of water, the curious name for the hill, and the lane !

The cromlechs and maenhirs found in such numbers in Moab, in upper Galilee—in mountain regions only—so strongly resemble the Welsh ones that they point, I think, to a common origin. Call the race what you will—Hittite or Phœnician—at any rate it was an Eastern race, and a race of mountaineers.

HENRY A. HARPER.

## THE JERUSALEM YEAR BOOK.

THE first number of a Jerusalem Year Book has been issued by the Rabbi A. M. Lunez for the year 1882, and is intended to be continued if sufficient support can be obtained. The work is half in Hebrew, half in English.

The latter part contains an amount of statistics and general information which will be found most valuable. The following notes are taken from its pages.

The Market Days in the towns of Palestine are as follows:—

Jenin, every Tuesday.

Gaza, every Friday.

Hebron, every Friday.

Jaffa, every Friday.

Jerusalem, every Friday. (Cattle market, to which from 40 to 80 oxen and cows are brought for sale.)

Lydda, every Monday. (Cattle market, to which, besides oxen and sheep, horses, asses, camels, and mules, are also brought for sale. About 200 head of cattle come to market.)

Ramleh, every Wednesday. Only cattle market.

Suk Elihun, every Monday. All sorts of animals, of which there are sometimes 2,000 head, are sold here. Other goods—for instance, Bedouin clothing, &c.—are also brought for sale. This market day is the most important one in the country.

Safed, every Friday. Only grain sold. (This market day is already mentioned in an account of a journey made in the year 5282 (1522). This account is printed at the end of the book "Shabche Jerusalem").

#### Weights and Measures:—

1 rottle = 12 ukieh.

1 ukieh<sup>1</sup>) = 75 dirhem (drachms).

There is no smaller denomination of weight; the ukieh, however, is divided into  $\frac{1}{2}$ ,  $\frac{1}{3}$ ,  $\frac{1}{4}$ , &c.

1 jarra, used for measuring olive- and Sesame-oil, contains, if used for measuring olive-oil, 81 ukiehs, and if for Sesame-oil, 65 ukiehs.

1 timniyeh or tubbeh, about 8 rottle, used for measuring corn.

1 kantar = 100 rottles. With the exception of the two last denominations (jarra and timneh) those given above are used as weights.

In the villages grain is also sold by the saah =  $\frac{1}{4}$ , timneh, and the midd = 4 timneh.

The coinage used are the piastre and its fractions; the beshlik = 5 piastres, the wuzari = 3 piastres, the altilik = 6 piastres, and the medjidie = 20 piastres. As 110 piastres are equivalent to 1*l.* sterling, the piastre is worth 2*d.*

The city contains, besides three hotels, many hospices for pilgrims. The Casa Nuova offers lodging for one month. The Austrian Hospice, and that of the Knights of St. John, receive pilgrims, and give them board and lodging for thirty days. The Armenian Convent, the Greek Convent, and the Coptic Khan limit their hospitality to fifteen days. For Jews there

<sup>1</sup> = about 250 grammes.

are pilgrim houses for natives of Austria, Holland, and Germany, together with "houses for strangers," in the Jewish quarter. The different churches are represented by an Armenian, a Greek, and a Latin Patriarch ; by a Coptic and a Syrian Bishop ; by a Russian Archimandrite ; by a Jewish "Chacham Baschi ;" and by a Mohammedan Cadi. The Jews, who are divided into Sephardim, Ashkenazim - Peruschim, Hassidim, and Moghrabim, have four synagogues for the first sect, one for the second, one for the third, and five for the fourth. They have also sixty "houses of prayer and study," most of them called "Colleges," or else bearing poetical titles, such as "Fear of Isaac," "Grace of the Lord," "Glory of the Humble," "Tent of Moses," "Comfort of Zion," the "Crown of Fame," and so on.

There are twenty-one societies for religious purposes among the Jews. One of these is for preserving the books in the Colleges, another for the promotion of kindness and truth, and another (the number of its members is not given) consists of "those who are free from worldly affairs." Next there are the Jewish charitable societies and seven industrial societies--two near Jaffa, and the rest in or near Jerusalem.

As regards the sects, the Sephardim speak a language of which the basis is Spanish : it is called "Ladino;" the Moghrabim, a language whose basis is Arabic ; and the Sephardim, a mixture of Hebrew and German called "Yiddish." A very minute account is given of the Jews in Jerusalem : their occupations, the distribution of the "Haluka," or alms collected in the synagogues all over the world, their schools and colleges, the society called the Mikveh Israel. It is to be hoped that the next year's volume will contain statistics, as careful and exact, of the Mohammedan and Christian communities. The number of pilgrims in the year 1880 was 6,753, of whom 1,510 were Russians, 1,618 Greeks, 1,271 Armenians, 93 Syrians, 430 Jews, and the rest Protestants and Catholics, and, as nearly as can be made out, about 800 of the former to 1,000 of the latter.

The "Year Book" is recommended to those who take an interest in the affairs of modern Jerusalem. It must, however, be pointed out that it is at present too exclusively Jewish. The Hebrew portion of the work contains a paper on modern Jewish towns in Palestine, to which we shall perhaps refer in the next number.

# THE PALESTINE EXPLORATION FUND

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## NOTES AND NEWS.

THE organisation of the Geological Expedition, which was announced in July, has occupied the attention of the Committee during the summer. They have been so fortunate as to secure the services of Professor Hull, F.R.S., the Director of the Geological Survey of Ireland; he will be accompanied by his son, Dr. E. Gordon Hull, as Assistant Geologist, and Medical Officer to the party. Captain Kitchener, R.E., who is now in Egypt, has received permission to employ his leave in accompanying the party. Two volunteers, Mr. Henry Hart (who has received a grant from the Irish Academy for botanical research) and Mr. Reginald Lawrence, will also accompany Professor Hull.

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As regards the route, the first part will be across the Sinai Desert from Suez to Akabah, whence they will travel north by the Wâdy Arabah, to the south end of the Dead Sea. The key to the geological problems of the whole country lies in this little-known region. The party will afterwards visit Moab, along the border of which country the Nubian sandstone comes to the surface. Opportunity will be, of course, taken by the officers to make notes as to the topographical features of the Wâdy Arabah, and to examine as much as possible into the various Biblical questions which belong to the district. A summary of these has been prepared for the party by Colonel Sir Charles Wilson.

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It is calculated that the cost of the whole expedition, including that of publishing the results, will be under £2,000. Any who wish their subscriptions specially devoted to this work should state their desire to the Secretary. A form of subscription is enclosed.

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The late Mrs. Anne Jay, of the Villa Bertolini, Lausanne, Switzerland, who died on June 10th last, has left a legacy of £2,000 to this Society. The bequest will not, however, be available in time for the new expedition.

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The investigation into the Shapira manuscripts has created a great deal of interest during the last three months. A narrative of the affair, together with the letters and reports of M. Clermont Ganneau, Captain Conder, Dr. Neubauer, and Professor Sayce, with the report of Dr. Ginsburg to Dr. Bond, will be found in this number.

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A paper has been contributed by M. Clermont-Ganneau, to the "Revue Critique," on the names of the personages associated in early mediæval art with the Crucifixion. "St. Longinus," the soldier with the spear, got his name, M. Ganneau shows, from the spear itself,  $\lambda\circ\gamma\chi\eta$ . The penitent thief, St. Dysmas, may be, he thinks, a corruption of  $\varepsilon\imath\zeta\tau\acute{a}\varsigma\delta\nu\sigma\mu\acute{a}\varsigma$ —i.e., the west—derived from the representations of the sun and moon found in primitive pictures of the Crucifixion. The name of the impenitent thief—Gestas—is possibly the remaining  $\varepsilon\imath\zeta\tau\acute{a}\varsigma$ . The soldier who bore the sponge is sometimes called Stephaton, which, M. Ganneau thinks, is derived from a misreading of the word  $\sigma\pi\acute{\iota}\gamma\gamma\omega\nu$ .

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The September number of the "Contemporary Review" contains a remarkable paper by Professor Sayce on the Gods of Canaan.

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Canon Tristram's volume on the "Flora and Fauna of Western Palestine" is rapidly advancing. The author thinks there is no reason why the book should not be ready before the end of the year. The illustrations are ready: they comprise six plates of mammals, seven of birds, twelve of fishes and reptiles, and one of gastropods.

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As regards the Jerusalem volume, that, it is hoped, will also be ready about the same time. The drawings are nearly all completed with the exception of those to illustrate M. Clermont Ganneau's work.

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Captain Conder's "Heth and Moab," being a popular account of his recent campaign and discoveries, will be ready this month (October). As in the case of "Tent-Work in Palestine," a considerable reduction in the price will be made or subscribers *only by application to the office in Adam Street.*

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The only authorised lecturers for the Society are—

(1) The Rev. Henry Geary, Vicar of St. Thomas's, Portman Square. His lectures are on the following subjects:—

The Survey of Western Palestine, as illustrating Bible History.

Palestine East of the Jordan.

The Jerusalem Excavations.

A Restoration of Ancient Jerusalem.

(2) The Rev. James King, Vicar of St. Mary's, Berwick. His subjects are as follows:—

The Survey of Western Palestine.

Jerusalem.

The Hittites.

The Moabite Stone and other monuments.

The income of the Society, from June 25th to September 30th inclusive, amounted in all, including subscriptions, lectures, and payment for maps, memoirs, and publications, to £576 6s. 11d.

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It is suggested to subscribers that the safest and most convenient manner of paying subscriptions is through a Bank. Many subscribers have adopted this method, which removes the danger of loss or miscarriage, and renders unnecessary the acknowledgment by official receipt and letter.

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Subscribers who do not receive the *Quarterly Statement* regularly, are asked to send a note to the Secretary. Great care is taken to forward each number to all who are entitled to receive it, but changes of address and other causes give rise occasionally to omissions.

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While desiring to give every publicity to proposed identifications and other theories advanced by officers of the Fund and contributors to the pages of the *Quarterly Statement*, the Committee wish it to be distinctly understood that by publishing them in the *Quarterly Statement* they neither sanction nor adopt them.

## THE GEOLOGY OF PALESTINE.

(*The following summary of geological work hitherto accomplished in Palestine is abridged from Professor Huddleston's Address to the Geologists' Association, Vol. VIII, No. I.*)

As a direct result of the great Napoleonic wars, the commencement of the present century was not favourable to the investigation of distant countries, and the records of travel are consequently but few. It is, however, a fact that about this period certain parties in England formed a kind of association for the exploration of Palestine, and there is a tradition that agents were sent out, who failed, in the then disturbed state of affairs, to reach the Holy Land.

Shortly after the conclusion of the general peace which resulted from the crowning victory of Waterloo, great efforts were made by most European States to extend geographical knowledge. In the direction of Arabia and Palestine our fellow-countrymen, Irby and Mangles, were not long in availing themselves of the recently acquired opportunity, and about the same date Burkhardt commenced his classical researches. Soon afterwards there was a renewal in England of the attempts to form an association for the exploration of Palestine, but somehow the attempt fell through, although a certain amount of money was collected for the purpose. The balance of this fund, amounting to upwards of £130, was handed over to the Royal Geographical Society in 1834.<sup>1</sup>

The decade from 1830 to 1840 may be said to have witnessed the first serious attempts to describe the *geology* of Palestine and the neighbouring countries. The oldest of these really geological works is that by Botta, entitled "Observations on Lebanon and anti-Lebanon," published in the *Memoirs of the Geological Society of France*,<sup>2</sup> 1833.

The year 1837 was rendered memorable for the important discoveries then made. Dr. Roth, a Bavarian, brought from Judea a series of fossils, many of which have since been described by Dr. Fraas. But the great discovery of all was the recognition of the depression of the Dead Sea basin, a circumstance which had escaped the notice of Burkhardt and all the earlier travellers. It is difficult to believe, at this time of day, that not only were the writers of antiquity ignorant of this most important feature, but that even modern men of science, five-and-forty years ago, were equally in the dark on the subject. Several names are mentioned in connection with this discovery, and amongst others the names of two Englishmen, Messrs. Moore and Beck, who published an account in the "Journal of the Royal Geogra-

<sup>1</sup> It appears that the "Palestine Association" held a meeting on the 24th April, 1805; but that, in the interval from 1809 to 1834, no steps were taken by the Association. On the 28th January, 1834, a meeting was held, Mr. Bartle Frere being in the chair, when the sum of £135 9s. 8d., being the balance of the funds, was disposed of as stated in our text.

<sup>2</sup> 1st ser., vol. i, p. 135.

phical Society" for 1837. There was some difference in the earlier estimates of the amount of depression ; but, to anticipate, I may say that the figure fixed upon by the surveyors of the Palestine Exploration Fund is 1,292 feet below the level of the Mediterranean.

The Biblical Researches of Dr. Robinson, an American clergyman of great learning, published about this period, contain much valuable physical information, which was materially supplemented by a posthumous work, entitled "Physical Geography of the Holy Land." Russegger, an Austrian mining engineer in the employment of Mehemet Ali, travelled in Egypt and Nubia, and subsequently in Sinai, Palestine, and the Lebanon, though his principal work was not published till some time afterwards.

1840-1850. Stimulated by the remarkable discoveries which had been recently made, and encouraged, perhaps, by the success of their learned fellow-countryman, Dr. Robinson, the Americans seemed to have taken up the subject of the geology and physical geography of Palestine with much zeal. In 1843 appeared an important paper by Hitchcock,<sup>1</sup> who, although personally unacquainted with the country, put together the notes and examined the specimens forwarded by certain American missionaries with such sagacity that, as M. Lartet cynically remarks, he was able to give a better account of its structure than the majority of Eastern travellers, whether before or since that time.

Undoubtedly the most remarkable effort of this decade was the celebrated United States Exploring Expedition under Lieutenant Lynch.<sup>2</sup> In April, 1848, the party descended the Jordan in boats from the Lake of Tiberias to the Dead Sea, and to them we owe the first thoroughly reliable information respecting these two sheets of water and the river which connects them. So tortuous is the bed of the Jordan that, within the space of 65 miles, the river was found to traverse a distance of at least 200 miles. Considerable difficulties were experienced from shallows and rapids, but these were finally surmounted, and the two metal boats which contained the party entered the Dead Sea on the 18th April. This was probably the first time that the Jordan had been navigated the entire distance between the two lakes.<sup>3</sup> Under the superintendence of Dr. Anderson a large collection of fossils was made during this expedition, chiefly from the Lebanon, and from certain localities in Western Palestine. Many of these were subsequently described and figured by Conrad in the official report.

With this expedition all doubts as to the true physical structure of the great *fissure*, known as the Ghor, extending from the hollow of Syria to the Red Sea, were terminated. The weird and unwholesome nature of the place, and the strange traditions with which it was associated, had

<sup>1</sup> "Assoc. of American Geologists," p. 369, Boston, 1843.

<sup>2</sup> The official report was published at Baltimore in 1852.

<sup>3</sup> The banks of the river at the termination of its course were found to consist of red clay and mud ; soundings gave a depth of 7 feet, with muddy bottom ; width of river 80 yards ; current three knots per hour. At the actual embouchure the river was found to be 180 yards wide and 3 feet deep.

long enveloped the *Lacus asphaltitis* in a haze of mystery akin to the fogs which a copious evaporation sometimes causes to hang over its waters. Opinions might be divided, as they still are, on the causes which have produced this remarkable fissure, but the leading facts of its physical structure had at length been obtained, and thus the way was paved for the study of its geology.

The decade extending from 1850 to 1860 does not appear to have been marked by any great expedition having reference to those subjects, but the succeeding ten years were very fruitful in discovery, and the investigations of that period may be said to have formed the staple of our information up to the present day. The most important works are "Aus dem Orient," by Dr. Fraas, of Stuttgart, published in 1867, and M. Louis Lartet's essay on "The Geology of Palestine," published in 1869.<sup>1</sup> It is from these two works, but more especially from the latter, that this communication has, in the main, been compiled.

M. Lartet accompanied the Duc de Luynes in his expedition to Palestine during the spring and early summer of 1864. Lieutenant Vignes assisted in the navigation on the Dead Sea, and published a narrative of the journey conformably to the instructions of the Duke himself. The party having made a short excursion into the Lebanon, passed by way of Galilee and Samaria to Jerusalem, whence they proceeded to embark on the Dead Sea in the iron vessel "Ségor." A thorough examination of the Dead Sea and its shores was the result, thus supplementing the observations made by Lynch's party sixteen years previously. Precautions were especially taken for obtaining specimens of the water for analysis from various depths by means of an apparatus which is described and figured in Lartet's work. These results were of great value. After spending a month on the Dead Sea, the party ascended the right bank of the Jordan, about half-way to the Lake of Tiberias, and thence returned by the left bank; thence to the mountains of Ammon and Moab, which they were the first to examine scientifically.

A second visit from Jerusalem was made to the Dead Sea by way of the mountains of Judaea, and thence along the Arabah to the watershed, the altitude of which was determined barometrically by M. Vignes. The hollow south of this watershed, or ledge, usually known as the Wâdy Akabah, was found to be little else than a desert of sand, sometimes in motion, sometimes cemented by saline incrustations. The rocks of the Mount Seir range presented opportunities for studying the granites, &c., so extensively developed in Sinai and Egypt, but which are wanting in Palestine. Having reached the Gulf of Akabah, they returned north by way of Mount Hor and Petra, and then, crossing the Arabah obliquely, passed over the calcareous plateaux which form the continuation of the desert of the Tîh to the south of the mountains of Judaea. A second

<sup>1</sup> As M. Lartet's voyage was made in 1864, there are numerous notices by this author previous to 1869. See "Bull. Soc. Géol. de France," 2nd ser., vol. xxii, p. 420 (1865); *id.*, p. 537; *id.*, p. 719; *op. cit.*, vol. xxiv, p. 12 (1866).

expedition was made into the trans-Jordan district, attended with much success in the discovery of cretaceous fossils. Finally, having traversed the basaltic flows of the Jaulan (*Gaulanitis*), the sources of the Jordan itself were inspected, and especially the Hasbâny, its longest, if not its most copious, branch.

I have been thus particular in describing the route of M. Lartet from February to June, because his journey has been more productive of geological information than any other as yet undertaken. Nevertheless, our own fellow-countrymen were not idle at that period, as the notices of Messrs. Duncan, Carter, and Holland, in the "Quarterly Journal of the Geological Society," and in other publications, will show. In 1868 Mr. Bauerman also contributed a valuable paper entitled "A Geological Reconnaissance from Suez to Wâdy Feiran,"<sup>1</sup> and about six years afterwards Mr. Milne, another student of the School of Mines, published some important "Notes on the Sinaitic Peninsula and North-West Arabia."<sup>2</sup>

In the *Quarterly Statement* of the Palestine Exploration Fund for 1869 it is observed with regard to geology—"Of this we are in ignorance in almost every detail. The valley of the Jordan and basin of the Dead Sea is one of the most remarkable on the earth's surface." As observed by Murchison, "It is the key to the geology of the whole district." Hitherto no great amount of geological matter has been published in the pages of the *Quarterly Statement*, although the other subjects have, for the most part, received ample illustration. Yet some of the papers by Captain Conder show that the subject of geology, and especially the question of the age and nature of the deposits of the Jordan valley, have possessed considerable attraction for him. Captain Conder's "Physical Description of the Holy Land,"<sup>3</sup> and his chapter on the "Jordan Valley,"<sup>4</sup> should be read diligently by every one who desires to become acquainted with the geology of Palestine. The 1-inch Map of Western Palestine was published by the Committee of the Exploration Fund in 1880, and they have also issued a very useful reduction, together with sections drawn to scale.

The peninsula of Sinai was surveyed by a party of Royal Engineers, under Captains Wilson and Palmer, assisted by Mr. Holland, about the year 1869, and the model of Mount Sinai now at the Indian Museum was executed about the same time.

Though scarcely geological, the admirable volume of the late Dean Stanley, and the adventurous narratives of Canon Tristram, contain much geognostic information, and as they are well illustrated and ably and pleasantly written, these works have always been in great favour with the English public.

Finally, the two greatest authorities on the geology of Palestine have within the last few years published the results of their latest information.

<sup>1</sup> "Quar. Journ. Geol. Soc.," vol. xxv, p. 17, *et seq.*

<sup>2</sup> *Ibid.*, vol. xxxi, p. 1, *et seq.*

<sup>3</sup> "Handbook to the Bible," p. 205, *et seq.* (Longmans, 1880.)

<sup>4</sup> "Tent-Work in Palestine," p. 214. (Bentley, 1880.)

In 1877 M. Lartet summarised his knowledge in a magnificent quarto volume, well illustrated with maps, sections, and plates of fossils, entitled "La Mer Morte," and in the following year Dr. Fraas brought out the second part of "Aus dem Orient" in the shape of a "Geological Treatise on the Lebanon."

Many valuable notices, in addition to those already mentioned, are scattered up and down in the Proceedings of Societies throughout Europe and America.

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### HEBREW INSCRIPTIONS.

CONSIDERING how scanty the ancient Hebrew and Aramaic texts whence we may draw definite ideas of the growth of the Hebrew alphabet still are, it will perhaps be interesting to note the result of the exploration of Palestine in this respect. In 1864, Madden could only compare the Hebrew of the coins with the coffin of Eshmunazar (which dates 500–400 B.C.), the Assyrian lion-weights (750 B.C.), and the Carpentras stone and Ptolemaic papyri (300–200 B.C.) ; all his other alphabets are later than the Christian era—including the Palmyrene texts (second century A.D.), the Samaritan text (527 A.D.), the Bowls found at Babylon (fifth and seventh centuries A.D.), and the Stones from Aden (717 A.D. and 916 A.D.).

In addition to these texts, and to the Phœnician inscriptions of Marseilles, Malta, Cyprus, and Athens, together with the Jewish coins of the Hasmonean age, we now have the Moabite Stone (876 B.C.), and the Siloam inscription (perhaps 732 B.C.), all of which are in the ancient character called "broken" in the Talmud (Tal. Jer Megilla, i, 11), and said by Rashi to be called *Libonai*, because it was used by the inhabitants of Lebanon—that is to say, by the Phœnicians. The object of the present note is to gather together the instances which show the early existence of the square character in Palestine itself ; for of the texts given by Madden, the earliest approach to the square character is found on papyri, and on a monument of Egyptian origin. The square characters are derived from the Aramaic or Syrian branch of the Phœnician alphabet, and not from that which gave birth to the Moabite, Siloam, and Hasmonean types.

Carrying our researches backwards, we must first recall the inscription at the Synagogue of Kefr Bir'im ("Memoirs," Vol. I, p. 233). It is in square Hebrew, and the character of the building agrees with Jewish tradition in attributing the erection of the doorway to about the year 130 A.D. The position of the text forbids us to suppose that it was executed later than the time of the erection of this synagogue. This was also the opinion of Dr. Robinson ("Lat. Bib. Res.," p. 70). It may thus safely be referred to the second century A.D. To the same date belongs

the similar square Hebrew text at the Synagogue of El Jish, and the illegible fragment from Nebratein.

The tomb of the Beni Hezir at Jerusalem presents us with another valuable text. In this case also the inscription can hardly be supposed to be later than the tomb, as it is quite inaccessible; and the tomb is most probably to be dated as earlier than the great siege (70 A.D.), since after that siege the Jews were excluded from Jerusalem down to the fourth century, whereas we know that the tomb in question was already in existence and supposed to be very ancient in 333 A.D. The Beni Hezir text is referred to about the Christian era by Du Vogüé; it should, however, be noted that the tomb within contains only *kokim*, which points to its being of considerable antiquity, and the Hasmonean period appears to be one during which many of the finest monuments round Jerusalem were constructed. The letters in this text, though nearly approaching square Hebrew, still retain traces of the older Aramaic forms, especially in the *Aleph* and the *Cheth*, while the *He* resembles that of the Carpentras stone, as do also the *Zain*, the *Yod*, the *Shin*. This text is the earliest and most important square text yet known in Palestine, and contains seventeen letters of the alphabet.

Another tomb near that of the Judges, north of Jerusalem, appears to belong to the same period, having an inscription in two lines, but giving no additional letters.

Jewish tombstones have been discovered in the Crimea with square characters, having the dates 702 and 726 of the Galuth (see "Transactions Soc. Bib. Arch.," Vol. III, p. 27). The Galuth of Jeconiah (Ezek, xxix, 17; xxx, 20) dates from 589 B.C., which would make these tombstones as early as 113 A.D. and 137 A.D.; a third dates from 785 of the Galuth, or 196 A.D. The genuineness of these tombstones is not disputed, but the era to which they have been ascribed by some writers seems to be too early, even if it be certain that the Jews were able to reckon the interval with exactitude, which is by no means the case with the later Jewish reckonings. The dates are, however, about the same as that of the Kefr Bir'im inscription. The Karaite era of the Galuth is generally identified with the captivity of the ten tribes in 696 B.C., because of an inscription which identifies the year 1700 of the Exile with 1316 of the Seleucid era, but this is not the Biblical date. It should be noted also that there is an era of Galuth on the coins generally identified with 139 B.C.

The sarcophagus of Queen Sara in the tombs of the Kings, discovered by De Sauley, is attributable to the century after Christ, about 45 A.D. The letters are very rude, but the character closely approximates to the square type.

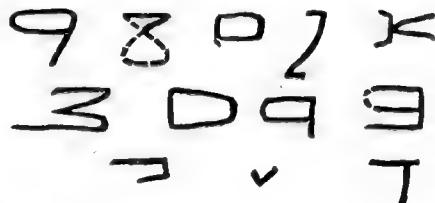
Beyond Jordan we have the inscription at 'Arâk el Emîr, which contains five letters of the alphabet. Of these three are of the old Phoenician forms, but two are quite distinct from any "broken" forms, and are clearly the *Daleth* and the *He*, or the *Resh* and the *He*, as on the Carpentras stone and the Papyri, but even closer than these, or than the Palmyrene, to the square forms.

In the course of the survey three tombs with Hebrew inscriptions were found, besides the Gezer stone, discovered by M. Clermont Ganneau. The first of these tombs was found by Mr. Tyrwhitt Drake at 'Ain Simai. The text was very rude, but the letters are of the square form (see "Memoirs," Vol. II, p. 302), closely resembling those of the Beni Hezir tomb. The form of the *Aleph* in the word Eleazar is nearest to the Palmyrene. The tomb contained a *loculus*. According to my reading of the text it represents the words—

משה בר אלעזר בר . . . כהן  
"Moses, son of Eleazar, son . . . priest . . ."

The forms of some of the letters are those which are found as early as 300 B.C. The letters omitted seem most probably to form the word Zechariah. This with the next two I have submitted to Dr. Isaac Taylor for an opinion. The Aramaic word *Bar* is used instead of the older Hebrew *Ben*, pointing to a date later than the Captivity.

Two other tombs were found, having inscriptions in the older character. The first text was copied by me at Umm ez Zeinât ("Memoirs," Vol. II, p. 71), the inscription having been discovered by Corporal Armstrong, R.E. The letters were large but very rudely scratched, and had once been coloured red. Twelve letters in all were found.



This tomb belongs to a large group of *loculus* tombs with a few *kokim*, and from the arrangement of the *loculi* it might be supposed to date at least as early as 200 B.C.; but, on the other hand, this part of Galilee had a thick Jewish population in the second century after Christ.

This inscription appears to me possibly to read—

אלעזר  
בר עז  
ריה

"Eleazar bar Azariah." The *Zain* would resemble that on the Hasmonean coins. The character approaches the Israelite rather than the Aramean.

The third tomb found during the course of the survey is that near the site of Archelais, a Herodian city in the Jordan valley. The letters are more distinctly cut than in the preceding instance (see "Memoirs," Vol. II, p. 396), and are of the older forms. The *Shin*, the *Vau*, the *Koph*, the *Aleph*, are all very near to the character of the Siloam text; but the tomb is only a grave sunk in the rock, and there is no indication of the exact date. Archelais was founded by Archelaus ("Ant.," XVII, xiii, 1;

XVIII, ii, 2) ; but an older town may perhaps have occupied the site, as in the case of Beth-Saida.<sup>1</sup>

The indications as yet obtained show that the Aramean alphabet was used in Palestine in the time of Christ, and even 300 years before His birth, the shape of the letters being even more completely defined than in the Palmyrene ; and some of these forms seem to be used as early as 176 b.c., in conjunction with the older types of the Phoenician alphabet, as evidenced by the inscription of Hyrcanus at 'Arâk el Emîr.

On the other hand we have the older forms of the letters on the coins as late as the year 40 b.c., and even later if the conclusions of Madden and De Saulcy concerning certain coins be accepted. It is clear that the two alphabets occur in use, side by side before the Christian era, although the researches of Gesenius, Levy, Renan, Lenormant, Du Voguie, Taylor, and others, show the gradual development of the square character from the older Aramaic and Phoenician forms. In Galilee, in the second century A.D., the square character was certainly in use, yet the Galilean tomb above noticed as having an inscription with the earlier forms, may possibly belong to the same period.

A curiously erroneous fashion of speaking of the characters used on the coins as "Samaritan" has survived, and leads to mistakes. Thus a correspondent to the *Athenaeum* (4th August, 1883) contrasts the alphabet of the Siloam inscription with that of the "Samaritan" letters on the Jewish coins, and supposes two "broken" alphabets to have existed side by side in Palestine. The characters on the coins were called Samaritan originally at a time when the nearest known alphabet resembling them was the Samaritan. It is clear, however, that Jews would not use Samaritan letters if they could help it, and it would be quite as accurate to speak of the coins as Phoenician or Greek. A comparison of coins and Siloam characters shows that they are the same alphabet save for differences in the *Vau* and *Zain*, which are scarcely greater than the differences between these letters on different coins. Considering that the Siloam text belongs to the eighth century b.c., and that the coins are probably never older than the second century b.c., these minor differences are very natural.

In the Talmud (Tal. Bab. Sanhed., xxi, 22), the square character is attributed to Ezra, which is a view not confirmed as yet by the researches of scientific men. It is, however, quite clear that the square and the older forms were both in use when the tract *Yadaim* (iv, 4) was written, that is to say, in the second century A.D. ; the *Ashuri*, or square character, was then employed with the old Hebrew language by the priests, whereas the older alphabet and the Aramaic language were used by the *Hidiut*, or ignorant.

A passage in the New Testament (Matt. v, 18) appears to imply the existence of the square letters in the time of Christ, and it will be seen

<sup>1</sup> The graffite on osteophagi, and in the tombs of the Prophets at Jerusalem, are not noticed in the present paper, because there is reason to suppose that they are too late to be of much value, nor are the mediæval graffite at Neby Samwil.

from what has been above stated that the results of scientific exploration confirm the accuracy of this deduction. It seems to be proved that the two alphabets existed side by side as early even as 300 B.C., which would agree with the arguments deduced from a consideration of certain clerical errors in the LXX version of the Pentateuch. The Ptolemaic papyri seem to show that the change may have occurred in consequence of the difference of material employed, the older forms being preserved in inscriptions on stone and on metal, while the greater facility given by the use of ink on parchment led to the divergence of the MS. forms from the monumental forms. A similar divergence is observable in the hieroglyphic and hieratic forms in Egypt, the first being the monumental, the other the literary character.

The history of the alphabet has been made so plain in Dr. Taylor's volumes, which I have just received, as to render a lengthy note unnecessary; but at the same time the value of the three new inscriptions above noticed is rendered yet clearer by his masterly sketch of the Aramean alphabets.

Hebrew MSS. do not give us any assistance in the study of the present subject because of their late date. Various fragmentary MSS. in Russia are supposed to belong to the seventh, eighth, ninth, and tenth centuries, though in each case the real date may be 107 years later than that usually ascribed. It is doubtful, indeed, whether we possess any Hebrew MS. older than the tenth century. The date of the old roll at Shechem is unknown, but the character in which it is written cannot be supposed older than the sixth century A.D.

Considering how completely the two alphabets appear to overlap in Palestine, even in monumental inscriptions, and also how great length of time would be required for the development of the square forms from the older ones, it is perhaps not impossible that the Talmudic tradition, accepted by Origen and Jerome, may have been in the main correct, and that the square letters, or forms approaching to them, may have been used in MS. writing even as early as the time of Ezra.

These remarks are offered with great diffidence, as the progress of archaeology in this direction has been very rapid of late. A further note on the subject by Dr. Isaac Taylor, or Dr. Ginsburg, or M. Clermont Ganneau, would be of great value to future explorers, as enabling them to separate the true from the false, and indicating the sort of information which is required by the learned. The inscriptions of which no *fac-similes* have been given in this paper will be found represented in the "Memoirs" as noted.

C. R. C.

## THE FORTRESS OF CANAAN.

"In the first year of King Seti there took place by the strong arm of Pharaoh, the annihilation of the hostile Shasu from the fortress of Khetam, of the land of Zalu, as far as Kanaan. The king was against them like a fierce lion. They were turned into a heap of corpses in their hill country : they lay there in their blood ; not one escaped to tell of his strength to the distant nations."

This fortress attacked by Seti I, in 1366 B.C., before the Exodus according to Brugsch, but perhaps during the time of the early Judges, is called in the great Harris Papyrus (of the time of Rameses III) a stronghold of the land of Zahi. It belonged to the Shasu or Bedawin, and had a stream and pool near it. The road by which Seti advanced led by Ribatha, which Brugsch believes to be Rehoboth, also in the land of Zahi, which he identifies with the Negeb or south country of Scripture. In 1700 B.C., we find an earlier king attacking the same land of Zahi, namely Aahmes, who advanced to Sheruhan (the Biblical Sheruhene or Shaaraaim, Josh. xix, 6). The name Zahi is, on the tomb of this king, identified with Pen Nekeb, or the Negeb land. It was a country producing wheat (as shown by an inscription of Thothmes III), and also balsam. Fruit trees and wine are also mentioned as products of the land of Zahi, in another inscription of Thothmes III.

It seems curious that this name of Kanaan should apply to a hill fortress, yet the inscriptions seem to leave no doubt on the subject. The state of our geographical knowledge concerning Egyptian conquests does not perhaps justify the certainty with which some authorities identify the Syrian towns conquered by the Pharaohs ; but in the present instance the indications are fairly definite and numerous. They show an advance from the vicinity of Gaza by Rehoboth (now *Er Ruheibeh*) and Sharuhene (which I have proposed to find in *Tell esh Sheri'ah*), to the hill country which is evidently that included under the term Negeb in the Book of Joshua, namely, the hills south of Hebron.

On Sheet XXI of the Survey, the ruined site of *Kan'an* will be found marked south-west of Hebron. The word is spelt just as on the Egyptian inscriptions, and as the name Canaan is spelt in Hebrew. This word is entirely different from the *Kandān*, which will be found as a name for several ridges of hill in the same district ; for the name of the ruin begins with *Caph*, and contains the *Ain* as the third radical, whereas the name for a ridge, spelt with *Koph* and *Aleph*, is the plural of *Kann*, a peak, or hill-top.

The ruin occupies a knoll in a very important position on high ground. The two main roads to Hebron, one from Gaza by Dura (Adoraim), one from Beersheba on the south, join close to the knoll of Khurbet Kan'an, and run thence north-west about  $1\frac{1}{2}$  miles to Hebron. West of the ruin is the 'Ain el Unkur, or spring of "crevisses," which issues from the rock and gives a fine perennial supply, forming a stream even in autumn. The

valley sinks suddenly from the little plateau where the spring issues, forming a deep ravine, now filled with fine orange gardens, orchards, and vineyards. It is here that the lake or pool apparently mentioned on the monuments may have once been formed by the abundant waters of the springs. There were several other good springs rather further west, draining into the same valley (Wâdy el Afranj), and 'Ain Abu el 'Adas, 'Ain Ibrahim, 'Ain Subeih, 'Ain Hameidân, are immediately to the north (see "Memoirs," Vol. III, p. 352, giving the enlarged Survey of the environs of Hebron). A small swamp (El Bussah, "the marsh") still occurs on the north, and the vicinity has a finer water supply than perhaps any spot in the Hebron hills. The vineyards are extensive, not only filling the Vale of Eshcol east of the fortress, but also covering the hill to the north ; and the threshing-floors of Dura and Hebron are large. Thus not only is the name identical with that mentioned in the Egyptian records, but all the surroundings of the site, its mountain position, its water supply, its command of the two main lines of advance from Egypt, its situation within the Negeb of the Bible, agree in indicating the identification as certain.

Of the ruin little remains. Foundations occur on the knoll, with a ruined watchtower on the west. It is, however, clearly an ancient site, for rock-cut tombs occur on the west between the knoll and the spring, which are so rudely hewn inside as to be possibly of the most remote antiquity. I had occasion to visit the spot more than once in 1874, and again in 1882, and it has long been considered an important place, though never identified in a satisfactory manner. Dr. Rosen placed Debir at this spot, but the identification of that city with Ed Dhâherfyeh is in every respect more satisfactory. Yet later Mr. T. Saunders has proposed to place Holon here, though why he should do so is a mystery, as the places have only the final *N* (not a radical) in common ; the true site of Holon is more probably *Beit 'Aula*, further west.

It appears, then, that King Seti's march was really an attack on the rich vale of Eshcol, the corn and vine lands of Hebron, a raid by one of the easiest ascents from Philistia to the Judean hills, either directed against the Hittites and Amorites and Kenites of Hebron, or (if we take an earlier date for the Exodus) against the children of Caleb. It was the fortress of Kanaan which guarded the approach to this rich country, and which the Egyptians stormed ; and it was with a similar object many years later that Rehoboam built a fortress in a somewhat better position, but in the immediate vicinity, namely, at the town of Dura or Adoraim, about two miles to the west.

Curiously enough, Seti took his name from Set, the patron deity of the warlike Hittites, against whom he was contending on this expedition. It was the fall of this fortress of Kanaan, apparently, which opened the way for the triumphs of his son, Rameses II, in his attack on the northern Hittites at Kadesh on Orontes.

## BETHANY AND BETHSAIDA.

THIS name *Bηθανία*, only known in the Greek, has received many explanations. It may be only the Aramaic form of the Hebrew Bashan ("soft or sandy soil"), but this does not apply well to the site. On the other hand, we know that the Hebrew nomenclature of Palestine is to a very great extent of Pagan origin. The geographic lists of Karnak agree with Genesis in showing that a Semitic nomenclature existed long before the conquest of Palestine by Joshua, and though in some cases the names were changed by the Jews, in many other instances they were not. Anathoth, for instance, is very probably named from the Assyrian 'Anath. The name Beth Anna is used on Assyrian tablets of the Temple of Beltis, wife of Baal. Possibly this Beth Anna is the real original form of Bethany, and the site was perhaps once occupied by one of the idol temples of Solomon (that of Ashtoreth possibly). See 1 Kings xi, 5-7.

The name 'Anath (which is quite a different word) is found also in Beth Anoth of Judah (now *Beit' Ainān*) and Beth Anath in Galilee, identified by Sir C. Wilson at 'Ainatha.

Bethsaida,<sup>1</sup> again, is a name which may be compared with the Assyrian Beth Zida ("Temple of Life"), which was the shrine of Nebo and Nana (Mercury and the Moon).

That there is nothing strained in these suggestions is evident when we recall the names Beth Shemesh ("House of the Sun"), Beth Dagon, Beth Peor, together with numerous towns named from Baal. Ashtoreth Carnaim is another instance, and Dan, mentioned before the tribe of Dan inhabited the spot (Gen. xiv, 14)—indeed before Dan was born—may have been named from Daian Nissi ("the Judge of Men"), an old Assyrian name of the Sun, whence the later Dionysus is derived, for Dan in all ages was a centre of Sun worship.

C. R. C.

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## NOTES.

THE *Quarterly Statement* for July contains one or two points which may excuse a note.

*Ashasharat el 'Arais* (p. 120) given as a name of some trees by Mr. L. Oliphant, is apparently a misprint for esh Shejerât el 'Arâis, which means "the Trees of Bridegrooms" (pl.), not the "bridegroom's" (sing.).

<sup>1</sup> In last *Quarterly* I have called attention to the name Abu Sudûn as occurring in Galilee, and perhaps connected with Poseidon. It might be objected that the *Yod* which occurs in the Hebrew Sidon is not found in Abu Sudûn. But in the Phœnician inscriptions from Athens and Carthage we find Sidon spelt without the *Yod*; and we also find a Carthagorean deity called **TY** who is no doubt connected with the same idea.

The name is commonly applied to springs in Palestine to the east and west of Jordan.

The name *Mezra'h* (p. 121) can hardly be considered more than descriptive ; it means "the sown land," and applies to every sown plot in the country.

The discovery of Roman remains (p. 140) near Port Saïd, and the account of towns by Ptolemy (whose latitudes are not reliable), cannot be considered to conflict with my statements. Roman remains in Egypt cannot be much older than the Christian era, and Ptolemy lived yet later. My remarks referred to events occurring at least 1,500 years earlier.

C. R. C.

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### ARAB TRIBE MARKS (AUSAM).

THE following tribe marks were collected both east and west of Jordan, and are of considerable importance for several reasons.

**T** This, with the next, was found inscribed on the walls at Masada by De Saulcy, who mistook both for planetary signs.

The tribe marks at Ammân he also copied, but was unable to give any explanation of the meaning. The sign is that of the Jâhalin tribe who live in the vicinity of Masada.

**♀** This is the tribe mark of the Rasheideh, an old tribe now nearly extinct, in the vicinity of Engedi. The sign which is now used as that of the planet Venus is the *Ankh* in Egypt, and is found in Assyria as early as 1500 B.C., as a symbol probably of the planet Venus. The Abu Nuseir use a similar mark, and I have found it also east of Jordan.

**)** A tribe mark at Masada, although the tribe was not ascertained. This is one of the common Himyarite forms of the letter *Resh*.

**I** The tribe mark of the elder branch of the 'Adwân ('Ashîret Diâb). This is the Himyarite numeral *one*.

**II** The mark of the second or junior branch of the 'Adwân ('Ashîret en Nimr) is the Himyarite No. 2.

**III** The mark of the 'Abbâd, allied to the 'Adwân, is the Himyarite No. 3.

**ג** The mark of the 'Ajermeh, an old tribe near Heshbon. This is the Æthiopic *Gimel*. It is also found with a single stroke, marking a subdivision of the tribe. It is sometimes reversed and becomes *Lamed*. It is the Nabathean *Daleth*.

**Λ** Another 'Ajermeh mark ; is also probably *Lamed*, as in Æthiopic. It may also be a *Samech* or a *Gimel* in Nabathean (Sûfa inscriptions).

 The Da'ja mark, a tribe near 'Ammân, is the 'Ain common to so many Semitic alphabets.

 The Beni Hassan mark near Sûf and Jerâsh closely approaches the Himyaritic *Resh* or Nabathean *Beth* (*Safa*).

 A mark of one of the Belka tribes near Heshbon, somewhat like one of the Himyaritic letters, namely *Theth*, which is also used as a numeral ; or it may be the Æthiopic *Vau*.

 The mark of the Beni Sakhr, which they call "the coffee-spoon," is the Himyaritic *Yod*; also found in *Safa* inscriptions.

 Another mark of the Fâîz family of the Beni Sakhr, is called "the necklace." This is the Himyaritic *Tza*, but bears no resemblance to the *Teth* of the same alphabet.

 Another division of the same great tribe is perhaps only a variation of the "coffee-spoon," but approaches the Æthiopic *Daleth*. The preceding mark and the coffee-spoon occur with a single stroke to show the elder family of the tribe division bearing the mark.

 The mark of the Jibbûr, a division of the Beni Sakhr. They say it is not a cross, but it is clearly the *Tau* of Himyarite and other Semitic alphabets.

 The "Raven's foot" is also used by the Jibbûr. This is the Himyaritic *Heh*, but more nearly akin to the Nabathean form of the letter.

 Used by divisions of the Khurshâîn, who belong to the Beni Sakhr tribes. These approach the Himyaritic and Æthiopic *Vau*.

 The mark of the Sherârât, also a division of the Beni Sakhr. This is the Himyaritic *Tzadi*, a very peculiar form not found in other Semitic alphabets.

 A mark of the Sh'alân, who are a division of the 'Anezech. It somewhat resembles the Æthiopic *Beth*.

 A mark of the Kowâkbeh, who are a division of the 'Anezech. This also may be a *Beth* approaching the Nabathean and Palmyrene forms.

 A mark of the Shawâbkeh, another Belka division. This may be a *Resh*, as in Nabathean. It is akin to the 'Ajermeh mark.

 Called "the door," is the mark of the Khadir, also a division of the Beni Sakhr. This appears to be the Himyarite *Beth*, and it is interesting in this case to see the name of the latter still preserved, for *Bab*, or door, is the *Beth* in Hebrew also.

These marks I obtained on the spot, and they were explained to me by the Arabs themselves, who, however, being unable to read, have no idea of the derivation or meaning of the marks which they use on camels and other stock, also on tombs, and which they place on the walls of ruins where they suppose treasure to be concealed, to which they thus lay claim. They also place these marks on menhirs and dolmens, and on solitary

stones, and sometimes in such numbers as to have the appearance of inscriptions.

The German Palestine Society published a number of these tribe marks in 1879 with the title *Inschriften*, including many of the marks above given. The distinction between real inscriptions and collections of tribe marks is, however, simple, because Nabathean and Himyaritic inscriptions are written in regular lines.

It is natural that some of these marks should originate from a southern Semitic alphabet, because the stronger Arab tribes which exist in a nomadic condition in Syria originate from Yemen and the Nejd. They began to push northwards a little after the Christian era, and have gone on migrating in this direction ever since. We should naturally expect inscriptions in the same character east of Jordan, and, as mentioned in another paper, four such inscriptions have recently been found, but these belong probably to the time of the semi-civilisation when Zenobia ruled in Palmyra; for the majority of the Bedawin share the peculiarity of which Muhammed was proud, being quite unable to write or read. The list of tribe marks is by no means as perfect as could be desired, but it is sufficiently long to indicate clearly the origin of these signs. It is noticeable, however, that while the 'Adwān and Beni Sakhr marks are letters of the south Semitic alphabet, the Ausām (pl. of Wusm) of the 'Ajermeh and other old Belka tribes are nearer to the Nabathean and Thamudite. The Belka tribes are probably of the old Nabathean stock, but the dominant tribes—Beni, Sakhr, and 'Adwān—immigrated from Arabia some three centuries ago. The distinction is thus natural and very instructive.

C. R. C.

### APHEK.

THIS word in Syriac is said to mean "springs." At Afka on Lebanon magnificent springs occur, as also at 'Ain Fijji, and at Fikich. The Aphek east of the Sea of Galilee is also in a situation with water, and the derivation seems thus to suggest that other Apheks would be at or near springs.

In Judah we have an Aphek, or Aphekah (Josh. xii, 18; 15, 53; 1 Sam. iv, 1), which some writers have conjectured to be the present Kustul. There is no connection of name, and nothing beyond an insignificant land spring, at that place. The Aphek of Joshua xii, 18 may be a northern Aphek near or on Gilboa, perhaps Fukū'a (1 Sam. xxix, 1), or Fūleh, near the well-watered valley of Jezreel. The Aphek of Joshua xv, 53 was not far from Beth Tappuah (Tuffūh, near Hebron) and Humtah (perhaps Khamasa). The Aphek of 1 Samuel iv, 1 was on the way from Mizpeh to Philistia. It may perhaps be thought to be the present Wad Fūkin, the Pekiin of the Talmud, which is close to Khamasa, and situated in a remarkably well-watered valley beside one of the main high roads

from Philistia to Jerusalem. It is curious to note that there is a Fikieh near Bâb el Wâd, on the road from Ramleh to Jerusalem, and a convent of El 'Azar east of it near Abu Ghosh. These may represent an early tradition of the episode of 1 Samuel iv, being sites respectively for Aphek and Ebenezer; but the Christian origin of the latter site, and the fact that Fikieh is not near any spring, seem to preclude the acceptation of these sites as genuine. If, however, a line be drawn from Neby Samwil through Deir el 'Azar south-west it nearly strikes 'Aslîn, which has been thought to be Ashnah (Josh. xv, 33), a name very close to Shen. Ebenezer was between Mizpeh and Shen.

No real trace of Ebenezer has yet been found, and the whole topography of the episode is vague. Deir el 'Azar occupies a very prominent site looking down towards the plain of Sharon. The ruins, which I revisited in 1881, present heaps of stones and large cisterns. It seems to me probable that it was once supposed to be the site of Ebenezer, and that the Philistine camp was then supposed to have been in the Merj Fikieh at the bottom of the pass. I have pointed out that Jerome places Ebenezer at Dier Abân, no doubt supposing 'Ain Shems to be Shen; but this tradition seems far less probable than even the localisation now suggested. The evidence is perhaps hardly strong enough to allow of our considering Deir el 'Azar to be the real Ebenezer, but its claims ought not to be forgotten, as 'Azar and Ezer are the same word.

C. R. C.

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### HAZOR.

THIS name, so common in the old nomenclature of Palestine, signifies "enclosure," and has been thought to refer to cattle-yards. The aboriginal Avim "dwelt in Hazarim" (Deut. ii, 23), but the name Baal Hazor suggests a religious enclosure. In the vicinity of Kefrein we found a Tell Mahder, the name of which is radically the same as the Hebrew Hazor. The top of the Tell is surrounded by a great wall of stones piled up in a circle. Many such circles, some of great size, occur on the plateau above, and appear to be very ancient. It may be suggested that the name Hazor applied to such circles, and that they had (as in other lands) a sacred origin.

C. R. C.

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### DIBLATHAIM,

"THE two cakes," or discs, was a town of Moab (Jer. xlvi, 32), and Diblath (now *Dibl*) of Galilee (Ezek. vi, 14). The name is a very curious one, and occurs on the Moabite Stone. Now in Moab we discovered immense stone discs resembling millstones, but not pierced in the middle, and

too large for ordinary use as millstones. Possibly these may explain the name Diblathaim, and one of them occurs at a site which would be appropriate for Almon Diblathaim, but which is now called Kueijîyeh ("the head ornament").

C. R. C.

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### RAMOTH LEHI.

(*Judg. xv, 9-19.*)

THE early Christian tradition, as noted by Reland and Robinson, would seem to place this site close to Eleutheropolis or Beit Jibrîn, where Samson's fountain was shown. This probably accounts for the name of the ruin Shemsâniyat, or "the Samson places," west of Beit Jibrîn.

Aquila and Symmachus render the name by the Greek Σιαγων, as Eusebius notes in the Onomasticon. This might be thought to have some connection with the ruin of *Siâgh* east of Beth-Shemesh, for Josephus also uses this name ("Ant.", V., iii, 8), and the vicinity to Beit 'Atâb (the Rock Etam) seems appropriate. It is not, however, very probable that the name would survive in Greek. A spring exists near, and the name of Lehi ("the jaw") might very well be given to the gorge of Wâdy Ism'aîn immediately north, but these indications are too feeble to give any real identification.

Other indications further west are noticed in "Tent Work" (Vol. I, p. 276), which are perhaps more satisfactory, but do not amount to identification. The district was re-explored in 1881, but no further light on the matter was obtained.

Lehi seems to have been a district, and Enhakkore a spring in this district. There are springs called 'Ayûn Kâra near the coast, north of Yebnah, which might be thought to be connected by name with Enhakkore, but these are probably too far west. Near Siâgh there is a ruin, Marmita, which might be thought to preserve the name Ramoth, the *M* being only a servile.

Near Gaza is the village Beit Lâhi (the *H* is not, however, a guttural). This place is noticed in the life of Hilarion, and by Sozomen ("Hist. Eccles.", V, chap. v). The latter authority supposes it to have been named from an ancient temple still represented by a mosque. It is not probable that this has anything to do with Lehi. Finally, there is a Beit Leyi on the Roman road south of Beit Jibrîn. This may be named from the Christian tradition as to the site as above noticed, but this does not seem a very probable site, because it is far away from Samson's country.

The general result of two special visits of exploration, and of a collection of the general literature of the subject, thus seems unfortunately to leave us still in doubt. I am inclined to think that what has been said in "Tent Work" represents the nearest approach to probability attainable.

C. R. C.

## JUDAH ON JORDAN.

(Josh. xix, 34.)

A SIMPLE explanation of this curious reading occurs to me as follows. The Hebrew is—

וּבֵית הַוְרָה הַיְرָדֵן

The *Daleth* and the *Resh* are so easily confused, and are so well known to have been confused in many cases in the Old Testament, as also the *Heh* and the *Cheth*, that we might very well read *Hurah* for *Hudah*.

*Hurah ha Yarden* would mean “the Hollow of Jordan,” and is thus equivalent to the *Ghor*, or hollow, which was the real east boundary of Naphthali—just as “*Judah on Jordan*” is said to be. The roots *Kûr*, *Ghor*, and *Khor* are all allied to each other. It is interesting to find the *Ghor* noticed under this name in the Bible.

C. R. C.

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## SAUL'S JOURNEY.

THIS question is likely to be long disputed because of the meagre nature of our information. I may perhaps be allowed once more to state a route which seems intelligible. It does not seem to me that any value attaches to ideas of *view* from any point on the journey, because nothing is said in the Bible about such a view. It is assumed by the disputants in the last *Quarterly Statement* that the “land of Benjamin” is mentioned in connection with Saul's journey. This is not the case. The Hebrew says (1 Sam. ix, 4) “he went across the *Aretz Yemeni*.” This may be rendered “the land of the south,” and seems to show a change of direction. It is not said whence Saul started, whether from Zelah or Gibeath. But he went—

Through Har Ephraim — Jebel Nâblus.

“ Aretz Shalisha — probably near Kefr Thilth.

“ Aretz Sh'alim = “land of caverns.”

“ Aretz Yemeni = “land of south.”

To Aretz Tzûph, or “of the view.”

This name in Arabic might be either *Safa* or *Shûfa*. I should be sorry to be too positive as to the exact site of the Nameless City, but Kirjath-Jearim is a very likely place for Samuel to have visited, because the ark was then at this city. It stands on the south side of a valley, and on the north side just opposite is a ridge with two ruins called *Shûfa*, which may represent *Zuph* very properly.

There is a curious indication also in the expression “the end of the city” (verse 27), for this expression is also used of Kirjath-Jearim (Josh. xviii, 15). It refers, perhaps, to the curious spur on which the old ruin ‘Erma stands.

There is another point, perhaps not very important but yet worth noting. Josephus (who, however, had only the Old Testament to guide him) calls the Nameless City Ramah. This might be his rendering of Arim, the later form of Jearim (Ezra ii, 25). From Kirjath-Jearim the route which would most easily be followed is along the ancient highway which leads east to El Khudr, and joins the Hebron road near that town : thence Saul would go north and pass naturally by Rachel's tomb (1 Sam. x, 2). As to the return, it seems to me as clear as anything can well be that it was to Gibeah of Saul, called in full Gibeah ha Elohim, a sacred place where there was a "garrison" (Speaker's Commentary would render "pillar") of the Philistines. The word here is נֶצֶב as in 1 Samuel xiii, 3, and it is identical with the Arabic *Nusb*, which means in the Korân and in common use a menhir and nothing else. There was such a Netzeb at Geba as mentioned in the latter passage, and there seems no reason why the place should not be the same in both cases, viz., *Jeb'a* near Michmash.

Mr. Shapira's rendering of 1 Samuel x, 2 has no particular value, because it is not the meaning of the Hebrew. Mr. T. Saunders only reproduces very old-fashioned views as to Ramah founded on the facts that Samuel had an ancestor named Zuph, a man of Mount Ephraim (1 Sam. i, 1), and that Ramah and Bethlehem are connected in the New Testament (Matt. ii, 18). It is surely quite impossible to extend Mount Ephraim so far south as Mr. Saunders would do. The latter gentleman has, however, shown so little respect for either topography or philology in his theories that, in my opinion, he should not be cited as an authority. Mr. Birch's objections to this view as to Ramathaim-Zophim seem to me to be very strong.

C. R. C.

### SUPPOSED NABATHEAN AND HIMYARITIC TEXTS FROM MEDEBA.

*3rd August, 1883*

THESE four inscriptions are preserved in the Latin Patriarchate at Jerusalem, where I saw and copied them in 1881. They had been sent by the Latin missionaries from Medeba, east of Jordan, and were discovered early in 1881. Visiting Medeba in August of the same year I was informed that they had all been found by excavation, or amid heaps of fallen stones, when the newly-established Latin colony, at this ruined city, was engaged in building up rude drystone enclosures for their cattle. It is possibly one of these stones which Canon Tristram saw in 1872, and which he mentions of an illegible Phœnician text (many of the letters being similar to those of the Phœnician alphabet). He saw also Latin and Greek texts, which seem to have been since removed or destroyed ("Land of Moab," p. 311).

These inscriptions are in characters quite different, as a rule, from the alphabet of the "Moabite pottery;" and it does not appear that they have ever passed through the hands of any person interested in the said

pottery. No. I is on a limestone slab of rude shape, cracked on the right, and measuring 15 inches in length by 12 inches in height, the text occupying about 5 inches by 8 inches. It seems nearest the Sinaitic.

No. I.

No. II.

No. III.

No. IV.

No. II is on another limestone slab, 20 inches long and 8 inches high. The text occupies 18 inches by 3 inches. This is perhaps the most curious of the four.

No. III is much better preserved than the two preceding, and the letters are closely like the forms of the Himyaritic or Sabeen alphabet. The stone, also a slab of limestone, is 11 inches long and 8 inches high; the text occupies 9 inches by 4 inches.

No. IV, also well preserved, is on a slab 12 inches by 9 inches, and the text occupies 9 inches by 6 inches. It approaches Palmyrene.

The Latin ecclesiastics offered no opinion as to these stones, but were convinced that they were genuine inscriptions. They had not, I understood, shown them to any good archaeological authority, but most courteously allowed me to measure and copy the inscriptions, and said that they would be glad to be informed of their value. I forwarded a copy at once to England for the examination of scholars, but it would seem to have been lost in the post, as it excited no interest.

As regards the likelihood of the genuineness of the inscriptions, it should be noticed that Medeba was an important town in the second century, and as late at least as the fifth. The immigration of Arab tribes from Yemen, in the second century A.D., is well known to have led to the settlement of the Beni Ghassān tribe in the Hauran, and no doubt at the same time other Arab tribes would have invaded the Moab plateau round Medeba. There are many indications of Himyar and Sabeen influence in the district,

including legends of the Tobba Queen Belkîs, together with the survival of the word *Nejis*, used in southern Arabic and in *A*ethopic for a king or ruler. There is a ruin called *Homriyeh*, or "Himyarite," and another, *Kusr el Homrah*, which (as there is no red colour at the place) probably means the "Himyarite palace." This last name applies to a building close to Hesbân, on the north. These remarks apply specially to No. 3; for the others are nearer Nabathean than to Sabean.

A favourable opinion as to the value of the texts has been given by the Rev. Isaac Taylor, in a private letter to me; but he remarks (as I had also done in writing to him) that no recognised alphabet contains all the letters of either of the texts.

The discovery of inscriptions by Halevy in Yemen, concerning which many learned papers by Captain Prideaux will be found in the "Transactions of the Society of Biblical Archaeology" (Vols. II, IV, V, VI), has thrown a flood of light on the history of the southern Semitic alphabet, and the present texts may perhaps serve to form some kind of link with the Nabathean and Palmyrene. A few notes are here hazarded, with a list of the symbols, which may be useful to any scholar who is able to decipher the inscriptions.

1		In No. 3, line 2, is perhaps the <i>Aleph</i> , as in Himyarite and in the Safa inscriptions.
2		In No. 2, line 2, and No. 4, line 3, is perhaps the <i>Beth</i> , as in Sabean, or perhaps <i>Tau</i> , as in Nabathean.
3		In No. 2, resembles somewhat the <i>A</i> ethiopic <i>Beth</i> , but is also like the Sassanian <i>Heh</i> of the fourth century A.D.
4		In No. 4, line 2, possibly the <i>Daleth</i> , as in the Haurân, or at 'Arâk el Emîr.
5		In No. 2, perhaps the <i>Gimel</i> , as in <i>A</i> ethiopic. It may, however, be a <i>Daleth</i> , as in Nabathean of the fourth century A.D.
6	 F	In No. 3 and No. 4, appears to be the Nabathean <i>Heh</i> ; the right hand form might, however, be a Nabathean <i>Shin</i> .
7		In No. 3, line 1. This is the Himyarite <i>Vau</i> . It is also a sign common in Cypriote and Lycian as <i>T</i> . The Safa <i>Vau</i> seems to occur as the last letter of No. IV.
8		In No. 4, might be the Nabathean or Sabean <i>Nun</i> ; it is also possibly <i>Lam</i> .
9		In No. 2, line 1, resembles the <i>A</i> ethiopic <i>Zain</i> and <i>Dhal</i> , which are letters originally identical. It is not unlike the Palmyrene <i>Tzadi</i> .
10		In No. 1, No. 2, and No. 4, is the Nabathean <i>Gimel</i> . Also found in Palmyrene and other Aramaic alphabets. In Aramean, however, the <i>Yod</i> takes this form.
11		In No. 3, lines 2 and 4, is one form of the Himyarite <i>Yod</i> . It only occurs in this inscription, which is throughout nearest to the south Semitic types.
12		In No. 2, line 2, is not unlike the <i>A</i> ethiopic <i>Caph</i> . It may be a <i>Samech</i> , or may be the same as No. 2.
13	 V	In No. 1 (possibly in No. 2, No. 3, and No. 4), seems to resemble one Himyaritic form of <i>Lamed</i> .

14  In No. 1 and No. 2, resembles the Nabathean *Lamed*.

15  On No. 2 only (line 2), is the very distinctive Himyarite *Mem*.

16  On No. 3 only (lines 1 and 2), is probably the Himyaritic *Nun*.

17  On No. 1 resembles the Sabeans and Aethiopic *Nun*. It is, perhaps, the same as No. 8, though the top stroke is longer.

18  On No. 2, line 2, though like the early Hebrew *Caph*, is probably the *Heh*, as at Safa, and in Sabeans.

19  In Nos. 2 and 3, is the Semitic *Ain* common to many alphabets distinctive as not Aramean. It is small and round as in Sabeans.

20  (Compare 14) on No. 1, resembles a Nabathean *Peh*. But it is most probably a *Lamed*.

21  In No. 1, might be the *Koph*, or perhaps *Yod*, or even *Vau*, as in south Semitic alphabets.

22  No. 1, line 2, is like the *Resh* on Sassanian coins of the fourth century, or the *Vau* of the same alphabets.

23  No. 3 and No. 4, probably the Himyarite *Resh*, as in alphabets derived from the Tyrian.

24  No. 3 might also be *Beth* or *Koph* in Himyarite, or in Nabathean respectively.

25  No. 3 and No. 4 is the *Tau* in many Semitic alphabets. It is distinctive as not having the Aramean form.

26  On No. 1 (see 13). Might be the *Heh*, as in Aethiopic, or possibly the same as in line 2, a *Lamed*.

27  On No. 1, is something like a *Resh* in Himyaritic, differing from 23. This is a form on the Sinaitic inscriptions also.

28  Might be a *Tzade* or *Shin*. There are several other letters of somewhat similar form, such as the Palmyrene *Zain*.

29  On No. 1, line 1, is most like a *Caph* in Nabathean, or might be perhaps a *Shin*. The ordinary *Shin* of the Sabeans alphabet is not found.

30  An extraordinary form on No. 1. Perhaps a Nabathean *Shin*.

31  This approaches the *Beth* in Nabathean, and in Palmyrene. It may be a *Nun*, as at 'Arak el Emr.

32  Perhaps *Tsadi*, as in Palmyrene, and in Sassanian inscriptions.

33  Perhaps a rude *Aleph*. See Nos. 6 and 37.

34  Possibly a form of *Samech*, as in Tyrian alphabets.

35  Is nearest to the Aethiopic *Lamed*, or may perhaps be a *Gimel*, or a *Samech*.

36  Possibly another *Lamed*, or *Resh*, as in Sabeans reversed.

37  In No. 4 (and perhaps in No. 1) might be an *Aleph*.

38 | In Nos. 2 and 4, is a numeral (No. 1) in Sabean texts. It might also be a form of *Zain*, as in Palmyrene.

39 | Perhaps a careless *Zain*, as in Palmyrene.

40 | Perhaps a careless *Yod*, but is now probably a *Gimel*. In No. 4, lines 1 and 3, a somewhat similar letter with the cross strokes rising, is, perhaps, the Aramean distinctive form of *Ain*.

Some margin must be allowed for carelessness, for the inscriptions are not very well executed on the whole. No. I seems nearest to Nabathean, and No. III to Sabean, and each text must of course be considered separately. As the genuineness of the texts may possibly be called in question it should be noted that forms 6, 15, 21, 24, 31, occur on the Moabite pottery. They were pointed out during the controversy as showing the pottery to be forged, because they were there found, not as in the present instance with the Himyaritic and Aramean forms, but with the alphabet of the Moabite Stone, which was considered impossible.

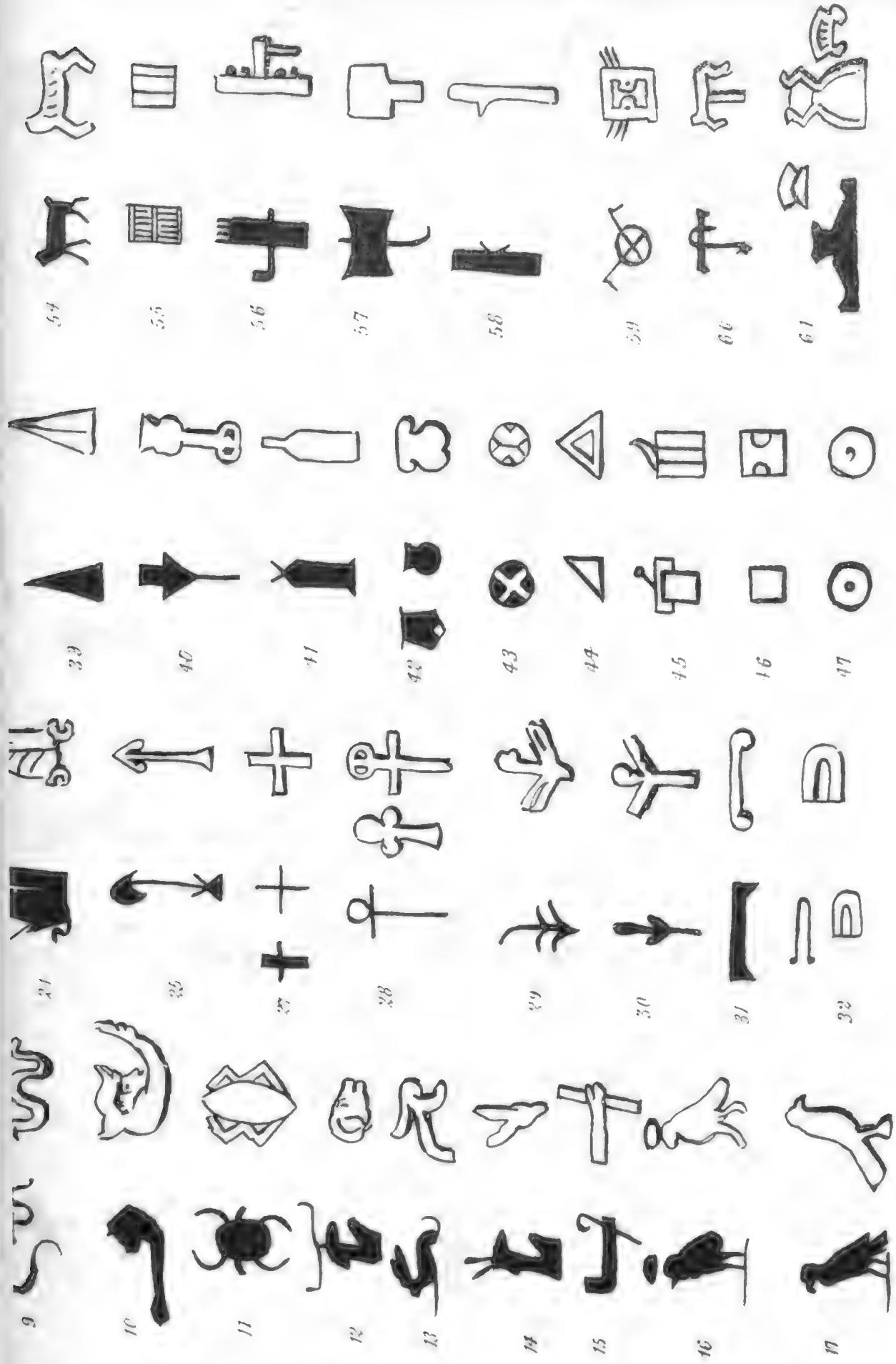
The inscriptions should also be compared with the Palmyrene, and (as Rev. Isaac Taylor points out) with the Proto-Pehlevi. Forms 2, 4, 10, 14, 31, 32, and 38 have much in common with the Palmyrene, and with early alphabets of the second century A.D., from which modern square Hebrew is supposed to have developed (although perhaps earlier than is sometimes admitted). In Zend and in Pehlevi there are also forms worthy of consideration, as resembling Nos. 5, 22, 32.

The situation of Medeba gives great interest to the inquiry ; for on the one hand we have the inscriptions of Sinai and of Arabia to compare, and on the other those of Palmyra, and the Sâfa, from the first to the third centuries A.D. As far as I have been able to ascertain no such inscriptions have before been found in the Belka, though Nabathean inscriptions of the Hauran were recovered by De Vogüié. We have a good many Greek inscriptions at Jerâsh and elsewhere, and to these the Moabite Stone and the Tyrus inscription must be added ;<sup>1</sup> but as yet we have no relics of the great age of the Beni Ghassân and of Queen Zenobia, which we should naturally expect to be represented by inscriptions in Moab. If scholars are satisfied of the genuineness of these four inscriptions, casts can no doubt be procured, but as they are very legible on the whole, I believe the copies will be found fairly accurate.

It should be noted that the Palmyrene and Iranian alphabets and square Hebrew come from the Aramean branch of the Semitic alphabets, with Nabathean, Thamudite, and the scripts of Petra and Sinai. The Sinaitic inscriptions are as late as the fifth century A.D., and are very like the present inscriptions Nos. I, II, IV. The south Semitic alphabets were

<sup>1</sup> The Tyrus text is of great value, being probably dated as 176 B.C. It only contains five letters, the first of which is the Phœnician *'Ain*, and the fourth the Phœnician *Yod*. The second, third, and fifth letters are, on the other hand, of the Nabathean, Palmyrene, or square Hebrew type. Thus the inscription seems to blend the two branches of the Semitic alphabet together, which may also prove the case in the present text, No. II.





EGYPTIAN.	HITTITE.								
1				2		3		4	
5				6		7		8	
9				10		11		12	
13				14		15		16	
17				18		19		20	
21				22		23		24	
25				26		27		28	
29				30		31		32	
33				34		35		36	
37				38		39		40	
41				42		43		44	
45				46		47		48	
49				50		51		52	
53				54		55		56	



distinctly derived, and No. III is more distinctly of Southern origin. No. IV seems nearest Palmyrene. No. II contains Aramean forms, together with the older form of the 'Ain, which is not Aramean. The Aramean 'Ain occurs in No. IV.

I would note, finally, that the Moabite Arabs use Himyaritic and Nabathean letters as *Ausâm*, or tribe marks (as I hope to show in "Heth and Moab"). These must not be mistaken for inscriptions, where they are found (as is often the case) cut in numbers on some monument or sacred stone. It is not difficult to make the distinction, partly because the tribe marks are cut irregularly and not in lines, partly because they are generally recent and very rudely cut. Nevertheless this mistake has been made by more than one traveller in Moab and in Arabia.

C. R. C.

## THE HAMATHITE INSCRIPTIONS.

*1st September, 1883.*

IN the last *Quarterly Statement* (p. 133) I ventured to draw attention to the similarities of the Hittite and of the earliest Egyptian hieroglyphics. I have since been encouraged to pursue the comparison further, and to draw up a list of sixty-one Hittite symbols, for which a parallel may be found in Egyptian. I am aware of the comparisons made by Professor Sayee between the Lycian, Cypriote, and Hittite symbols; but it seems possible that the suggestion, to which I am now anxious to draw the attention of Egyptologists, will not ultimately conflict with these comparisons. I am also aware that the Hittite symbols have been compared with hieratic, without any very useful result; but it seems more likely that the key of one monumental system should be found in another, than that the monumental Hittite symbols should resemble that literary character which derives from the hieroglyphic or monumental Egyptian.

Among the symbols compared many of the Egyptian are ideographic signs, or determinatives, while others are well-known alphabetic forms; but as these occur together in Egyptian they may perhaps do so also in Hittite, and the comparison does not therefore seem to be vitiated. It is true that many normal Egyptian forms (such as the *Mem*, the *Caph*, the *Resh*) are not apparently traceable on the Hittite texts; but, on the other hand, the signs commonest in Hittite seem, as a rule, to be equivalent to common Egyptian symbols. The comparatively small number of signs used in Hittite reminds us of the selection by Thothmes III of a few of the commonest Egyptian symbols in his transliteration of the names of Semitic towns in the Karnak lists.

A few notes may be added as to some of the most interesting of these comparisons, but first I would note that all the Hittite texts as yet published appear to be written *boustrophedon*, or in lines alternately from left to right and from right to left. This has already been remarked in

the case of the Hamath stones, and a careful study of the texts, which now number over a dozen in all, brings this prominently before the attention. The heads, the figures of birds, and of beasts, &c., are all looking to the right in the first line, while in the second these same symbols will reappear all looking to the left, and in the third again to the right. One would be inclined to suppose that all these texts read from the left-hand top corner, were it not that in at least four cases the emblem No. 1 of my plate stands at the right-hand top corner, and seems to begin the text with a determinative, indicating speech.

The Hittite texts do not seem to be works of consummate art. The representations are far ruder than those of Egyptian hieroglyphics, and the symbol is not always exactly reproduced on each repetition. This may be due in part to the hardness of the basalt on which these figures are cut in relief ; and the difference between the Egyptian and the Hittite is often in great measure due to the fact that, while the former symbols are cut *intaglio*, or painted, the latter are hewn in relief. For this reason also, perhaps, the old wooden hieroglyphs of Hosi's tomb (in relief) are much more like the Hittite texts than are the finished symbols cut *intaglio* at a later age. All the Hittite texts as yet published are in relief, although one in *intaglio* has been discovered by Sir C. W. Wilson, thus approaching even closer to Egyptian.

The Egyptian equivalents (if so they be) I have taken from well-authenticated copies of texts of all ages ; but on the whole it seems to me that the oldest Egyptian texts give more forms for comparison than the later. The Hittite signs are mainly taken from photographs.

No. 1 is, I believe, a determinative in Egyptian. The finger raised to the lips indicates in Egyptian verbs of "speech"; No. 2, is the *Beth* in Egyptian ; No. 4, *Daleth*; No. 13, perhaps *Vau*; No. 15, a determinative of verbs of action ; No. 16, *Tau*; No. 21, *Tzadi* or *Teth*; No. 28, *Shin*; No. 32, *Samech*;<sup>1</sup> No. 34, *Vau*; No. 35, *Mim*; No. 42, *Gimel*; No. 43, the determinative for countries ; No. 44, *Koph*; No. 45, *Tzadi*; No. 48, perhaps *Aleph*, &c. These are obtained by comparison with the normal Egyptian alphabet, and by the values assigned to the hieroglyphic in connection with the Semitic alphabet on the Pylons of Karnak. Some symbols, on the other hand, like Nos. 7 and 8, though not belonging to the normal alphabet, are found on the wooden text of Hosi's tomb, and on other early Egyptian inscriptions.<sup>2</sup> No. 50, in Egyptian, is the sign for the backbone, which has been compared with the linear Babylonian Cuneiform.

These are but a few examples given as showing the possible value of the comparison, but most of the symbols will be at once recognised by Egyptologists as of common occurrence, and of well-known significance.

<sup>1</sup> No. 32 would appear to be also an *S*, and this agrees in a very remarkable manner with Professor Sayce's comparison with the *Se* of the Cypriote syllabary.

<sup>2</sup> Professor Sayce compares No. 23 to the Cypriote *Ko*, but as the syllabary did not distinguish *K* and *Kh*, this seems not to oppose the identification with *Cheth*.

The only questions which will arise are as to the closeness of the comparison with the Hittite, and as to the meaning in Hittite of the symbols, and also concerning the language in which the inscriptions are written.

In connection with this side of the question I would draw attention to the peculiarly Egyptian character of many signs. This is not only the case with No. 1, which may be called the head of Im-hotep, but also with No. 11, which has been likened to the scarabeus by several writers on the Hamath stones. No. 18 may not perhaps be considered a good comparison, but in Egypt *Bes* is represented with his tongue protruding, and similar masks occur not only in Asia but even in the statues of South America. No. 12 may be compared with the ram-headed Kneph. No. 14 seems to be a donkey's or fawn's head, perhaps recalling the ass's head of *Aau*, or of *Set*. No. 27, the *Ankh*, and No. 26, the *Cross*, are found also in Assyria, and Nos. 29 and 23 may also be observed among Assyrian emblems. No. 54 is one of the most interesting because most artificial. No. 26 and No. 22 have been compared to the so-called emblem of stability in Egypt. No. 24 was long since said to be a mitre, and seems to bear a close resemblance to the *Pshent*, which occurs very often in hieroglyphic inscriptions.

I am far from supposing that this comparison is perfectly satisfactory. I have no doubt that Egyptologists who are familiar with the list of 400 Egyptian emblems will be able materially to improve on this rough first sketch of the subject. There are several emblems yet left, including a bear's head, a divided circle,<sup>1</sup> and a few doubtful forms for which I have

Another character found at Carchemish, and also on Babylonian seals, is the following:—



It may be compared with the Egyptian *Heh*—



<sup>1</sup> Professor Sayce has written at length on this sign ፩, which may perhaps represent the 'Ain, if we follow his reasoning as to the goddess 'Ate. In this case it is to be compared with the hieroglyphic *Ain* which is the eye of Osiris. As to the signs resembling No. 27 of our plate, which occur in the hands of various deities at Boghaz Keui, I believe them to be variations of the *Ankh*, and probably phallic emblems. No student of hieroglyphics will deny that unmistakable phallic emblems occur in Egyptian writing, and the fact is admitted by Renouf, Pierret, and other authorities. It may have considerable value in assisting us to determine the value of various signs and the genders of nouns. Layard has given a cut representing a deity on a lion with such an emblem in his hand, and the *Ankh* is held by all Egyptian deities.

The information given in Professor Sayce's paper ("Transactions of the Society of Biblical Archæology," 1881, pp. 248-293) does not seem in any way to conflict with the suggestions of the present paper.

been able to find no equivalent. On the whole, however, the list represents the great bulk of the symbols, which recur again and again in the Hittite texts. In 1877 Professor Sayce published a list of fifty-six symbols. The present table contains a few more. Those for which Professor Sayce obtained very similar Cypriote characters are Nos. 25, 21, 47, 44; but, on the whole, I venture to think that the present comparison is fuller and more satisfactory. It seems hardly possible that so many coincidences can occur together merely by accident, and without giving any result.

I would propose, then, that, in the first place, an attempt should be made to read these inscriptions as though Egyptian, both in symbolism and in language, each line being read alternately right and left, beginning on the right in the first line. If it be ascertained that the language is not Egyptian, we might still use the symbols with the Egyptian value, and endeavour to interpret the language by aid of Accadian or of some kindred Turanian tongue, on the supposition that the Hittites borrowed hieroglyphic signs from Egypt as the Phœnicians borrowed the hieratic. Mr. D. I. Heath believes that the inscriptions are written in a Semitic tongue, which is of course also, *prima facie*, very possible, considering that the monuments occur either in or on the border of a Semitic land; and though the evidence so far goes against the supposition that the Hittites were a Semitic people, it must not be forgotten that they had Semitic deities (Ashtoreth, Baal, &c.), and were near neighbours of the Phœnicians. While it yet remains to be proved that the inscriptions in question really are of Hittite origin.

Without wishing for a moment to be thought ignorant of the valuable work of Professor Sayce concerning Hittite antiquities, I would venture to urge that, although it may be convenient to class all the new monuments and texts under the title Hittite, it must be considered only a provisional term, and the fact yet remains to be proved. The character may be Alarodian or may be that of the old Caucasian type, whence the Egyptians were derived. The Hittites were one tribe of a great race, but we know the names of many other kindred tribes further north. Until the language of the inscriptions is determined we are unable to state positively what race invented the character, and although it has been shown that the Hittite language was probably Aryan or Turanian, and not Semitic (as evidenced by the titles following the proper names, and by the proper names of Hittite princes themselves), it yet remains to be shown that the inscriptions are not in a Semitic tongue. At Ibreez the figures have the beard and whiskers with shaven moustache, which, as we know from the Egyptian monuments, was a Phœnician fashion. The probabilities are perhaps in favour of a non-Semitic origin of the so-called Hittite inscriptions, but as yet nothing is proven.

My reasons for making these suggestions are mainly historical. The Hittite texts (as we may continue to call them, since they are found in the land of the Hittites) might be either a rude and not very intelligent reproduction of Egyptian hieroglyphics, borrowed by the less civilised from the more advanced race; or, on the other hand, they may be

extremely archaic, and represent the true Asiatic origin of the Egyptian system. It is well known that the Egyptians came from Asia, and certain tribes which they greatly respected, because they were circumcised (the Caucasians, Achaeans, Sardones, Taurians, Ossetes, Zygritæ, Ligyes, and Zagylites) may have been of common stock with the old Egyptian race. Herodotus tells us that the Colchians were an Egyptian colony, but perhaps they were really of the stock from which the Egyptian emigrants sprang. However it be, the comparison which he draws shows how strong was the affinity between Egyptians and certain tribes of Asia Minor. Herodotus also believed the statues near Ephesus, which Professor Sayce calls Hittite, to be Egyptian. How if the father of history were right after all? or, at all events, right so far that the character employed was one also used by (if not borrowed from) the Egyptians? A German Professor discovered on the Niobe near Smyrna, only a few months ago the cartouche of Rameses II, and notes the Phœnician-like execution of this Egyptian text.

I must here finally mention what seems to be, perhaps, a strong confirmation of the present suggested theory. Professor Sayce has published a drawing of a silver boss ("Transactions of the Society of Biblical Archaeology," Vol. VII, pp. 298, 443), with a Cuneiform and Hittite bilingual. The Cuneiform reads: "Tarrik timme, King of the Country of Erme." The Hittite legend is twice repeated, and consists of only six characters. The one which Professor Sayce considers to be the first is No. 8 of our plate, viz., *Tau*. The one which he considers to be the third is either No. 39 or No. 44 of our plate, and would appear from the Egyptian to be a *Koph*. Here, then, we have in their proper order two letters of Tarak-timme's name; the one between must be the *R*, and is, perhaps, No. 59 of our plate. Perhaps, by aid of Egyptian, we may yet read the rest. The four vertical strokes are common in Hittite, and vertical strokes also occur in hieroglyph.

The Phœnicians have been shown to be the originators of the true alphabetic system, which they developed from the Egyptian cursive hand, according to Professor Isaac Taylor (i, p. 88). The Hamathite stones represent evidently a syllabary, or idiographic forms, or letters with prefixed determinatives. They may fairly be supposed to be older than the introduction of the Semitic alphabet, but they possibly might, in the end, prove to be hieroglyphs, used by early Phœnicians before that alphabet came into use. The *boustrophedon* arrangement is exactly that which the early Greeks obtained with their alphabet from Phœnicia.

All these suggestions I offer, with much diffidence, to the consideration of those who may be able to decipher the Hittite monuments, hoping that the comparison of sixty-one symbols will, even if many are rejected, perhaps prove a basis on which to work, and that we may thus finally become possessed of the secret which these mysterious emblems preserve.

## CITY OF DAVID.

MR. BIRCH is occupied in nearly every *Quarterly Statement* in exposing the “idle fancies” and “growing error” not only of Captain Conder, but also, at times, of Josephus. He states that it is an “entire mistake” to suppose the word *Matzab* is ever rendered a “pillar,” though it is constantly employed of the menhirs of the Canaanites, which are “images” in the English version, but by many authors recognised as equivalent to the *Ansâb* of the pre-Islamite Arabs.

What, may I ask, does Mr. Birch make of the words אלון מצב (Elon Matzab), rendered “oak of the pillar” in Judges ix, 6?

It cannot be considered that Mr. Birch’s case is strengthened by having to postulate that the authority, on whom after all we are obliged mainly to rely, “makes two false statements” or “deliberately altered” an inconvenient statement. I may perhaps be content to be placed by Mr. Birch in the same category with Josephus, and although it appears that I am so constantly inconsistent, I may perhaps be permitted to plead that Mr. Birch has been equally confident that he knows the exact place of the Tombs of the Kings, on more than one occasion, but in very different situations. The same may be said of the Nameless City, and this observation has been made by more readers than myself, so that we are still in doubt what Mr. Birch finally considers to be the truth.

As regards the proposal to recognise the “Tombs of the Kings” in the ancient Jewish sepulchre now called “of Nicodemus,” I can only say that the idea has been favourably received by many persons well acquainted with the history of Jerusalem. As regards the “balance of authority” in favour of Aera being west of the Temple, I would say that I do not rely on numbers, but on the character of the authority. I place Robinson Warren, Fergusson, and others whose names may be supposed to carry weight in one scale, and Mr. Birch in the other, and after reading all he has written I incline to give preference to the other view. If David and Solomon did not build a wall round the Upper City, why does Josephus say (“Wars,” V, iv, 1) that “the old wall built by David and Solomon began on the north at Hippicus”? Is this another false statement, or is Hippicus on the Temple spur, and is the Upper City *post* Herodian? And if they did why should the “City of David” be applied to a hill which was only walled in by later kings?

But leaving aside these questions—for to me it seems that the longer he studies the question of the tombs the more Mr. Birch will find his difficulties increase—I would ask whether he has realised the conclusions to which his theory leads him. The City of David, I understand him to believe, stood south of the Temple. He speaks wrongly of “the hill” on this side, for there is no distinct hill, but part of a narrow sloping spur which falls steadily from the Sakhrah, and has no valley to divide it from the part of the same spur on which the Temple stood. He also, I understand, excludes Ophel from the City of David, though it is not clear

where he supposes Ophel to have been. The Temple itself was, he will admit, outside the City of David, or at all events it was not inhabited. If this be the case his city is only about 10 to 15 acres in area—a population of 600 to 1,000 souls at most, taking even the proportion of any squalid modern village in Palestine, without public buildings, or indeed without any street. In Galilee the ordinary size of a village is 20 acres, and there are many of nearly double that size. Herod's Temple alone occupied 35 acres, and modern Jerusalem 200 acres, within the walls. But Mr. Birch's Jerusalem, or City of David, is only 10 to 15 acres in area, including the "fort," which was the lower city (*2 Sam. v, 6*), and the citadel itself, which was *not* the lower city (*Josephus, "Ant."* VII, iii, 1), unless Josephus makes another false statement. In fact, we have Zion, Moriah, Aera, Ophel, all on one spur within about 10 acres, while the remaining two larger hills and the remaining 190 acres have no names at all! And why? Because Mr. Birch refuses to accept any statement of the ancient accounts which does not agree with his theory.

Was this hamlet the capital of 15,000 square miles of kingdom in the days when Nineveh and Memphis were still inhabited? and if so, at what period of history did Jerusalem grow over the Upper City until it covered 300 acres in all? Not in the troublous latter day of her history surely, when, according to Mr. Birch's view, the "very old wall" of Josephus would seem first to have been built.

C. R. C.

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### THE SHAPIRA MANUSCRIPTS.

On the morning of July 20th last, Mr. Shapira called at the Society's office in Adam Street, and informed the Secretary that he had brought to England a manuscript, which if genuine would be certainly considered of inestimable value, being nothing less than a text of the Book of Deuteronomy, written on sheepskin, in characters closely resembling those of the Moabite Stone, and with many and most important variations. He refused to show the documents to the Secretary, but offered to do so if Captain Conder were also invited to be present.

On Tuesday, the 24th, he returned, and, in the presence of Captain Conder and Mr. Walter Besant, he produced the manuscript, and with it an account in writing of the manner in which he acquired it. This account, which he afterwards gave to the officers of the British Museum, was subsequently published in the *Times*, and is as follows:—

"He first heard of the fragment in the middle of July, 1878. A Sheikh, with several Arabs of different tribes, came to him at his place of business in Jerusalem on other matters. The Sheikh had nothing to do with antiquities. They spoke of some little black fragments of writing in the possession of an Arab. They had been found in the neighbourhood of the Arnon. One of the Arabs spoke of them as talismans, smelling of asphalt.

"The day following Shapira was invited to dinner by the Sheikh, and heard more about the fragments. About the year 1865, at a time of persecution, certain Arabs had hid themselves among rocks. There, on the side of a rocky cavern, they found several bundles wrapped in linen. Peeling off the covering they found only black fragments, which they threw away. They were picked up by one of the Arabs, believing them to be talismans. He kept them as such, and became rich, as he thought, in consequence. This was probably ten years or more before Shapira heard of them. Captain Conder knows the exact time. Shapira promised the Sheikh a reward if he would bring to him an Arab he spoke of who would be able to get hold of the fragments. This happened on the day of the dinner. The Sheikh fell ill, and afterwards died.

"About ten or twelve days after the dinner, a man of the Ajayah tribe brought to him a small piece, containing four columns. A few words only were legible. A week after, on Sunday, he brought fourteen or fifteen columns, containing the clearer writing. The next Sunday he brought fourteen or fifteen more columns, in another character of writing, but not all of one form. Ten days after, on Wednesday, he brought three or four columns, very black. Shapira saw nothing more of him.

"After an interval of four or five weeks Shapira wrote to Professor Schlottmann, on the 24th of September; soon after, also, to Dr. Rieu. The writings were (some of them) in better condition than at present. Schlottmann wrote that they were fabrications, and blamed Shapira for calling them a sacred text. He never saw the writings themselves, only Shapira's copy. Schlottmann wrote in similar terms to the Consul at Jerusalem, Baron von Münchhausen, and desired him to prevent Shapira from making the find public. Then Shapira wrote or telegraphed to Dr. Rieu that the writings were forgeries, and that he was to take no steps in respect to them. This he did in consequence of Schlottmann's judgment of them, and the reasons on which it was founded. He placed them in a bank in Jerusalem.

"Subsequently he began to reconsider Schlottmann's objections, and he found that they were partly grounded on mistakes Shapira had made in deciphering the writing. He felt better able to judge of them himself because he had had more experience in manuscripts. It was before Easter of the present year that he re-examined them, and he deciphered them a second time. Professor Schröder, Consul in Beyrouth, saw them in the middle of May, 1883, and pronounced them genuine. He wanted to purchase them. Shapira took the writings to Leipzig at the end of July to have them photographed. Professors there saw them. Dr. Hermann believed in them, as did Professor Guthe, who intends to write about them. They had been smeared with asphalte originally as a kind of embalmment oil and spirit. The oil was used by the Arabs to counteract the brittleness, and to prevent their suffering from wet."

Professor Schröder, of Beyrouth, has since written to the *Times* denying that he ever pronounced the documents to be genuine.

On Tuesday, the 26th, Mr. Shapira exhibited his manuscripts to a

small party of *savants* at the Society's offices. They were thence taken to the British Museum to be subjected to a closer examination. A translation of the commencement was also published in the *Times*, thus:—

"These be the words which Moses spake according to the mouth of Jehovah unto all the children of Israel in the wilderness beyond the Jordan in the plain. God our God spake unto us in Horeb, saying, Ye have dwelt long enough in this mount. Turn you and take your journey and go to the mount of the Amorites, and unto all the places nigh thereunto, in the plain, in the hills, and in the vale, and by the seaside. And when we departed from Horeb we went through all that great and terrible wilderness, which ye saw; and we came to Kadesh-Barnea. And I said unto you, Ye are come this day unto the mountain of the Amorites. Go ye up and possess ye the land, as said [unto thee the God of thy fathers.] [Notwithstanding] ye would [not] go up. And ye murmured and said, Because [God] hated us . . . to cause us to perish. And God was angry [and sware] saying, As I live, surely all the people that saw my wonders and my signs which I have done these ten times . . . not . . . they have not hearkened unto my voice, they shall not see that good land which I sware to give unto their fathers, save your children and Caleb the son of Jephunneh and Joshua the son of Nun which standeth before thee, they shall go in thither, and unto them will I give it. But as for you, turn you and take your journey into the wilderness by the way of the Red Sea, until all the generation of the men of rebellion shall be wasted out from among the host. [And they abode] in Kadesh-Barnea until the men of rebellion were wasted out by death from amongst the host. . . . Ye are to pass over this day the coast of the children of Esau, which dwell in Seir. Thou shalt not distress them, nor meddle with them in war, for I will not give you of their land any possession, because I have given it unto the children of Esau for a possession. The Horim from of old dwelt therein, and the children of Esau succeeded them, and dwelt in their stead. And we turned and passed the wilderness of Moab. And God said unto me, Ye shall pass over this day the coast of Moab, ye shall not distress them, nor meddle with them in war, for I will not give you of their land any possession, because I have given unto the children of Lot the city for a possession. The giants dwelt therein from of old, and the Moabites called them Amim, but God destroyed them, and they dwelt in their stead. And we turned and passed the brook Zered. And God said unto me [saying], Rise ye up and pass over the river Arnon. This day will I begin to deliver to thy face Sihon the Amorite, King of Heshbon, and his land. And we went forth against Sihon to Jahaz, and we smote him till we left him none to remain. And we took all his cities from Aroer, which is by the brink of the river Arnon, unto Gilead, and unto the brook Jabbok. God our God delivered all unto us. Then we turned and went up the way of the brook Jabbok. And God said unto me, saying, Ye are to pass this day the coast of the land of the children of Ammon. Ye shall not distress them nor meddle with them in war, because I have given unto the children of Lot the land of the children of Ammon for a possession. The

giants dwelt therein from of old, and the Ammonites called them Azam-zummim, but God destroyed them before them, and they dwelt in their stead."

A *fac-simile* of one slip of the manuscripts, containing four columns, was published in the *Athenæum*, with notes by Dr. Ginsburg, on September 8th.

On August 18th, while the skins were under examination at the Museum, the following letters appeared in the *Academy* :—

"OXFORD,

"August 13th, 1883.

"From the very outset, when I did not as yet know a word of the contents of Mr. Shapira's Moabite Deuteronomy (as I must call it, since it was discovered in the land of Moab, and is reported to be written in characters similar to those on the Moabite Stone), I held it to be a forgery. Mr. Shapira seems to have undergone for the second time the fate that befell him (according to his own statement) in the case of the Moabite pottery which now adorns the Foreign Office at Berlin (the Municipal Museum having refused to accept it). Judging from two inscriptions published by Dr. Schlottmann, of Halle, I then declared in the *Academy* all this pottery to be a modern fabrication. That I was right is now acknowledged on all sides. I am not now going to imitate Professor Kautzsch, who wrote a big book in order to prove the mistakes of grammar and idiom in the inscriptions on the pottery ; for this a few instances would have been sufficient, as they will also be in the present case.

"We have now the original text of the Decalogue as contained in the Shapira sheepskins, published by Dr. Ginsburg, with a few remarks, in the last number of the *Athenæum*. Here we find the first two Commandments of the received text fused into one in the Moabite text. There can be no doubt as to this, since each Commandment in the new version concludes with the words, 'I am God, thy God' (I shall have to say a word or two about this apostrophe later on). This is not, however, a new idea ; it was already mooted by mediæval Jewish writers. Next we are struck by the *ἀπαξ λεγόμενον*, **הַהֲרָתְךָ**, 'I liberated thee.' The usual verbs employed for liberating from Egypt and from the house of bondage, in the historical as well as in the prophetical books of the Bible, are either *yatsa* in the Hiphil form (as the received text has it here) or *padah*. The roots *harah* or *hur* are not used as verbs in the Old Testament, but only in the Targum, and in the Talmud, and then not in the Hiphil form, or with the particle *min*. It is difficult to understand how both texts of the Decalogue, in Exodus as well as in Deuteronomy, should have no trace of such a word, but employ uniformly instead of it the root *yatza*. In all the other Commandments of the Moabite text, moreover, Israel is addressed in the second person singular ; why, then, do we find in the First Commandment 'Ye shall not have,' 'ye shall not bow down ?' I shall not say much about the omission of the words 'before me' and the passage beginning 'for I the Lord thy God am a jealous God,' and ending with verse 10. This last passage we shall find in another Commandment of the new text. If, however, we have already found a strange idiomatical

expression, we have as yet come across no grammatical mistake. For this we must wait until we reach the Second Commandment, which refers to the keeping of the Sabbath. It runs thus: ‘Sanctify . . . for in six days I have made the heaven and the earth, and all that is therein, and rested the seventh day, therefore rest thou, also thee, and the cattle, and all that thou hast.’ **רָשְׁבָתִי**, ‘and I rested,’ is ungrammatical; it ought to be **וְאָשַׁבָּת**. Evidently the Moabite writer did not make use of Dr. Driver’s excellent work on the Hebrew tenses. The root *shaboth* does not mean ‘to rest,’ but ‘to cease from work,’ and in this sense only it is found in the Old Testament. The forger made a blunder in not leaving the root *noah* as in the received text. The word *gam* ought to be repeated according to classical Hebrew: cf. Exod. xvii, 31, 32, and elsewhere. The expressions ‘and all thou hast’ and ‘anything that is his’ are not classical Hebrew. The Fourth Commandment runs thus: ‘Thou shalt not murder the person of thy brother.’ But this is not Hebrew, as can be seen from the passage *urezaho nefesh* (Deut. xxii, 26). Here a clumsy use has been made of the Chaldee paraphrase. The Fifth Commandment says: ‘Thou shalt not commit adultery with the wife of thy neighbour’: cf. Lev. xx, 10. The Sixth Commandment reads: ‘Thou shalt not steal the wealth [*not* property] of thy brother.’ *Hon* is not to be found in the Pentateuch, the word *haïl* being employed there instead of it in the sense of ‘wealth.’ Now what is the meaning of these paraphrases of the last three Commandments? It is usually supposed that concise texts are the early ones, and paraphrases the later. Why is the word ‘brother’ employed twice, and the third time ‘neighbour?’ Is that a slip of the pen? We come now to the Seventh Commandment, the composition of which does no great credit to the author of it. Here we read: ‘Thou shalt not swear by my name falsely [Lev. xix 12], for I shall be jealous [Dr. Ginsburg translates ‘I visit’; but can *kanâ* be used in that sense, or is it a misreading?] the iniquity of the fathers upon the children unto the third generation who take my name for a lie’ (not ‘in vain,’ as Dr. Ginsburg renders it). I have already pointed out the strange—I should rather say the impossible—use of the root *kand*; but the expression *lenosey* is rabbinical; in classical Hebrew we would expect *laish asher yissa*. The word *eduth*, ‘witness,’ is equally a rabbinical form. Such is the grammatical and idiomatic character of the new Moabite text of the Decalogue. I will now pass on to some other points. Dr. Ginsburg informs us ‘that every Commandment begins a fresh line.’ This is a modern idea of writing; in the Siloam Inscription a word even does not end with a line. Dr. Ginsburg goes on to say that the words ‘that thy days may be prolonged’ (in the Fourth Commandment) are absent on one of the slips, but occur on the duplicate. He adds: ‘This is either due to an omission on the part of the scribe, or indicates that it is intended as a different recension.’ The account which Mr. Shapira gives of the way he came into possession of his treasure is rather contradictory, and somewhat damaging to the authenticity of the fragments. He says at the end of his letter addressed to Dr. Ginsburg:—

"In about twelve days I got [from an Arab near Aroer] four or five columns, with a few Phœnician [?] letters visible upon them; in eight days more he brought me about sixteen beautifully written columns; in eight days more about fifteen, not so well written; in eleven or twelve days more four or five well-written columns; and I have not seen the man again. The Sheikh died soon, and I lost every trace that would enable me to follow the object further."

"The end of the story is tragical; death sometimes comes when it ought not. But where are these *beautifully* written columns? From the reports in the *Times*, I gather that all the slips are not so easy to decipher. One point more. I have mentioned that the Decalogue begins and ends with the words 'I am God [*Elohim*, not *Jehovah*, Lord], thy God,' and that at the end of every Commandment these words occur again. This is certainly the cleverest thing in the new Deuteronomy, as it turns the fragments into an Elohistic text. (Dr. Ginsburg, by the way, states from memory that the expression **אל הים אלהיך**, 'God thy God,' does not occur in the Old Testament. It does, however, occur in the Elohistic Psalms, xlv, 8 and 1, 7. The last quotation might have served as a model for the new Decalogue.) Unfortunately, the Moabite Moses has blundered at the very beginning of the book by using the following words:—'These be the words which Moses spake according to the mouth of *Jehovah*' (so, at least, we read in the translation given in the *Times*). The rest of the chapter has only *Elohim*. This and the following chapters of the new Deuteronomy might be criticised with as damaging an effect as the Decalogue, but it is not worth our while to do so; *ab uno disce omnia*. The omissions and the additions in this part are made without even a superficial knowledge of the results of modern criticism. I shall only point out one oversight: i, 9 of the new text reads 'because I have given unto the children of Lot the city for a possession.' Instead of *city* the Authorised Version has *Ar*. The new text must consequently have **עיר** instead of **רָעַם**. Now in the Decalogue, as well as upon the Moabite Stone (for the *scriptio* of **דִּבְנָן**, Dibbon, Dr. Nöldeke rightly suggests that it was most probably pronounced *Daybon*), and also in the Siloam inscription, the *scriptio defectiva* is general; how, then, does it happen that **עיר** is written *plene*? Is it a slip of the pen again? I give my opinion on this grave question without being able to take any notice of the palaeography of the sheepskins. But I am certainly not very anxious to study the 'beautifully written columns' of the new Moabite scribe, as I am convinced from the text itself that the whole is a forgery.

"A. NEUBAUER."

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"QUEEN'S COLLEGE, OXFORD,  
"August 13th, 1883.

"We learn from the *Times*, as well as from Dr. Ginsburg's communications to the *Athenæum*, that the fragments of the Book of Deuteronomy which Mr. Shapira has brought to England are written in characters

resembling those of the Moabite Stone. Now the discovery of the Siloam inscription has shown that these were not the characters used in Judah (and therefore presumably in the northern kingdom of Israel) in the pre-exilic period. Consequently, if the fragments were genuine, they would belong to a Moabite and not to a Jewish Book of Deuteronomy, and the opening verse of the book would contain the name of Chemosh, and not of Yahveh or Jehovah.

"It is really demanding too much of Western credulity to ask us to believe that in a damp climate like that of Palestine any sheepskins could have lasted for nearly 3,000 years, either above ground or under ground, even though they may have been abundantly salted with asphalt from the Vale of Siddim itself.

"A. H. SAYCE."

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On August the 21st, M. Clermont-Ganneau's letter, written on the 18th, appeared in the *Times*, and on the same day Captain Conder's letter of the same date.

"I reached London on Wednesday last, instructed by the Minister of Public Instruction in France with a special mission to examine Mr. Shapira's manuscripts, at present deposited in the British Museum, and which have, for some time past, excited such great interest in England.

"My studies of the stone of Mesha, or 'Moabite Stone,' which I conveyed to the Louvre, and re-constructed in its entirety, my decisive disclosures with regard to the fabrication of spurious Moabite potteries, purchased by Germany, and my labours in connection with Semitic inscriptions generally, gave me, I ventured to think, some authority upon the question, and caused me to hope that the favour would be shown to me, which was accorded to other scholars, and to persons of distinction, of making me acquainted with these documents, which, if they should prove to be authentic, would unquestionably be of incalculable value.

"I will not conceal the fact that I entertained, in advance, most serious doubts as to their authenticity, and that I came here in order to settle these doubts. But I thought it my duty to pronounce no opinion until I had seen the originals.

"As soon as I had arrived I went to the British Museum, where my learned and obliging friend, Dr. S. Birch, was kind enough to introduce me to Dr. Ginsburg, whom I found in the Manuscript Department, engaged in studying the fragments, in company with Mr. Shapira. Dr. Ginsburg was good enough to allow me to glance at two or three of the fragments which were before him, and postponed until the next day but one (Friday) a more extended examination. He showed, however, some degree of hesitation, and finally expressed himself as uncertain whether it would be convenient or not to submit the fragments to me. It was agreed that I should have a decisive answer on Friday. I fancied that Dr. Ginsburg feared some encroachment on my part, in the matter of the priority of publication of a text which he has deciphered with a zeal which I am

happy to acknowledge, and which he has had the honour of first laying before the public. I endeavoured to reassure him in this respect, by informing him that I only wished to concern myself with the external and material state of the fragments ; that I should examine them exclusively with this object in view, in his very presence ; and that I was ready to bind myself to refrain from examining the text, properly so called, and from publishing anything whatsoever on the contents of the fragments.

"On Friday I went again to the British Museum, and Mr. Bond, the principal librarian, informed me, in the presence of my distinguished friend Mr. Newton, that he could not, to his great regret, submit the fragments to me, their owner, Mr. Shapira, having expressly refused his consent. There was nothing to be said against this ; the owner was free to act as he pleased. It was his strict right, but it is also my right to record publicly this refusal, quite personal to me ; and this to some extent is the cause of this communication. I leave to public opinion the business of explaining this refusal. I will confine myself to recalling one fact, with comment. It was Mr. Shapira who sold the spurious Moabite potteries to Germany ; and it was M. Clermont-Ganneau who, ten years ago, discovered and established the apocryphal nature of them.

"In these circumstances, the object of my mission became extremely difficult to attain, and I almost despaired of it. I did not, however, lose courage, and I set to work with the meagre means of information which were at my disposal :—(1) The hasty inspection of two or three pieces which M. Ginsburg had allowed me to handle for a few minutes on my first visit ; (2) the examination of two fragments exposed to public view in a glass case in the Manuscript Department of the British Museum—a case very ill-lighted and difficult of approach, owing to the crowd of the curious pressing round these venerable relics. I devoted to this unpleasant task both Friday and Saturday, and had the satisfaction of obtaining an un hoped-for result. These are my conclusions :—

"The fragments are the work of a modern forger. This is not the expression of an *à priori* incredulity, a feeling which many scholars must, like me, have experienced at the mere announcement of this wonderful discovery. I am able to show, with the documents before me, how the forger went to work. He took one of those large synagogue rolls of leather, containing the Pentateuch, written in the square Hebrew character, and perhaps dating back two or three centuries—rolls which Mr. Shapira must be well acquainted with, for he deals in them, and has sold to several of the public libraries of England sundry copies of them, obtained from the existing synagogues of Judea and of Yemen.

"The forger then cut off the lower edge of this roll—that which offered him the widest surface. He obtained in this way some narrow strips of leather with an appearance of comparative antiquity, which was still further heightened by the use of the proper chemical agents. On these strips of leather he wrote with ink, making use of the alphabet of the Moabite Stone, and introducing such 'various readings' as fancy dictated, the passages from Deuteronomy which have been deciphered and trans-

lated by M. Ginsburg, with patience and learning worthy of better employment.

"That which put me on the scent was the presence—ascertained by me at first sight—on the fragments of an important detail, of which I had not at first understood the full significance. The lines of Moabitish writing are arranged in the shape of columns, separated by vertical creases in the leather—that is to say, by creases perpendicular to the general direction of writing. On the right and left of each of these folds I had noticed two vertical straight lines, drawn with a hard point, as guides for the vertical margins, starting from the upper edge of the strip, and extending to the lower edge, which they do not always reach. The Moabitish forger had not paid much attention to these extremely fine lines, which have scratched the leather in an almost invisible but indelible manner; and the lines of Moabitish characters, instead of being confined by this drawing, have no relation to it. Sometimes they pass over the lines, sometimes they rest on the inner sides of them, both at their beginning and ending. The forger was obviously guided in observing the limits of his space, not by the vertical marginal lines, but by the intermediary creases. If, however, we compare these strips of leather with one of the synagogue rolls of which I spoke just now, the explanation of this mystery will be made plain to us at once.

"These rolls consist of large pieces of leather (generally sheepskin) sewn end to end, forming enormous strips, which may be 30 or 40 mètres in length, and with a breadth of 16 centimètres or more.

"The text of the Pentateuch, in the square Hebrew characters, is arranged in regular parallel columns containing some fifty lines each. At the top a horizontal margin is left, and at the bottom another horizontal margin, everywhere wider than the upper one, both extending for the entire length of the roll. This lower margin, to take an example, on a roll in the British Museum coming from Jerusalem and bearing the number 1460, measures 8 centimètres in height. The columns of the text separated by intervals, which, in the roll instanced by me by way of comparison, measure about 4 centimètres, are marked out with the stylus. The horizontal marks along which the square Hebrew characters are brought into line are confined on the right and left by two long vertical lines, traced in the same manner, which, for the most part, cross the first and the last horizontal line, and jut out into the upper and lower margin. This is not all. Between each column and the next one, the leather has a vertical crease which runs from top to bottom of the roll. It is these ends of the vertical lines drawn with the stylus and the peculiar creases which divide them which we meet with on the long narrow Moabitish strips whereon the forger has written his Moabitish characters.

"There is more yet. I have said that the large pieces of leather of the synagogue rolls were sewn end to end. Now, among the Moabitish strips, I saw at least one where this seam still exists. I need not point out how interesting it would be to examine the character of the thread. Finally, one sees that on the Moabitish strips one of the two edges, either the upper or the lower, is fringed and ragged. It is the original lower edge

of the roll which furnished the raw material to the forger. The second edge, on the other hand, is sharply cut with a penknife or scissors ; it is the cutting made by the forger immediately under the last line of the square Hebrew characters.

"I advise all the impartial scholars who would thoroughly inform themselves as to this gross imposition, and to whom may be permitted an examination which is denied to me (I know not, or rather, I know very well why), to take the suspected strips, and to lay them against the lower edge of one of the synagogue rolls preserved at the British Museum. The trick will stare them in the face. I will also beg my more favoured fellow students to be kind enough, in order to throw complete light upon a problem (which is no longer one to me), to make certain important investigations, especially the following :—

"(1) To ascertain whether, by chance, there does not remain on the upper portion of the strips traces of the tails of the square Hebrew letters, especially of the final letters which, as we know, descend below the normal line.

"(2) To see if the back of the leather does not materially differ in appearance from the face of it, and whether it has not been left in the raw state, as on the synagogue rolls.

"(3) To take the average height of all the strips, in order to obtain from them the greatest height, which will enable us to determine the height of the original margin of the roll (or the rolls) that supplied the forger. I can at once affirm that on this roll the columns of square Hebrew characters were from 10 to 11 centimètres in breadth, and were separated by blank intervals of about  $4\frac{1}{2}$  centimètres in breadth.

"(4) To ascertain the description of leather, and above all of the thread in the seams.

"Nothing is more easy than to effect the experimental examination which I suggest. Let there be given me a synagogue roll, two or three centuries old, with permission to cut it up. I engage to procure from it strips in every respect similar to the Moabitish strips, and to transcribe upon them in archaic characters the text of Leviticus, for example, or of Numbers. This would make a fitting sequel to the Deuteronomy of Mr. Shapira, but would have the slight advantage over it of not costing quite a million sterling.

"Who is the forger ? That is a question which it does not concern me to answer, nor even to raise. I will merely call attention to the fact that he can only be a person familiar with Hebrew, and who has had before his eyes exact copies of the Moabite Stone.

"One word in conclusion. It would be interesting to learn whether the forger has completely destroyed the synagogue roll from which he has cut the strips required for the imposition. Certainly elementary prudence would have required the annihilation of this *corpus delicti*. Nevertheless, the Hebrew text remaining intact, after the abstraction of the lower margin, and these synagogue rolls having a fixed market value, it is not impossible, although it would have been at a serious risk, that the forger

should have tried to make something by it, and to 'kill two birds with one stone.' If ever a synagogue roll should be met with without a lower margin, it will be well to try if, by chance, the Moabitish strips would not fit it.

"CLERMONT-GANNEAU."

"42, Great Russell Street, August 18."

"To the Editor of the "Times."

"Sir,—As my name has been mentioned in a letter published in the *Times* concerning this manuscript, I should be glad to be allowed to make a few remarks on the subject. I have no remembrance of having seen the fragments in question before they came to London, but have since had an opportunity of examining them, and, after comparing them with other manuscripts, true and forged, which I have seen in the East, I had no hesitation in concluding that the supposed fragments of Deuteronomy were deliberate forgeries. During the course of my visits to Moab in 1881–2, I had frequent conversations with the Bedawin concerning the Moabite Stone and other antiquities, and I collected four Nabathæan texts, which are shortly to be published. I never heard any Arab speak of the supposed find of Mr. Shapira's manuscript, but what I did hear from all the Arabs was that persons from Jerusalem had buried pottery in Moab, which they afterwards dug up in the presence of Europeans, and represented to be ancient. They showed me the places where these articles were buried, and named the persons concerned. The pottery in question was pronounced in 1873–4 by English and French *savants* to be forged. The alphabet of the pottery inscriptions was the same as that of the present manuscript, save for the introduction in the former of Himyaritic letters among the Phœnician forms. Some fragments of similar pottery have been shown to me by Mr. Shapira, and I understood that the Arabs represented these as having been found with the manuscript.

"Forgeries of coins, inscriptions, and manuscripts are common in Jerusalem, Náblus, Beyrout, Sidon, &c., and are often attributed to the poorer class of Jewish adventurers in those towns. In the present instance, it would be satisfactory to know the name of the tribe which discovered the manuscript. The only name yet given is that of Sheikh Mahmûd Arekat, who is not a Bedawin chief, but only a fellah chief of Abu Dis, near Jerusalem. The names of the Moabite chiefs and tribes I have carefully ascertained, and could say whether the district east of Aroer on Arnon belongs to any one of them or not.

"The use of square Hebrew by the Jews we have now traced in Palestine to a period earlier than the Christian era, and we know that the Palmyrenes and other trans-Jordanic peoples were using a similar alphabet about that time. The manuscript under consideration is therefore (if it be genuine) more than 2,000 years old. I do not think any archaeologist will suppose that leather, as limp and supple as that on which this manuscript is written, could exist for such a length of time in the damp atmosphere of a country

which has a rainfall of 20 inches. Having explored many hundreds of caves and tombs, I know well the mouldy smell of such excavations, and the rapid decay of frescoes not more than 600 years old on their walls. We know that the Accadians and Assyrians used papyrus and parchment, but not a fragment of their books is known to remain. The tattered fragments of our oldest Hebrew manuscript are not older than the seventh century A.D., and the condition of the famous oldest Samaritan roll at Shechem (a document which I have three times examined, and which, from the character of its letters, is not older than, perhaps, the sixth century A.D.) contrasts in an extraordinary manner with that of Mr. Shapira's leather leaves, supposed to be at least 1,400 years older, as does the faded colour of the letters with the very distinct black ink of the Shapira manuscript. It is only in the dry, rainless Theban desert that really ancient papyri (some 3,000 to 4,000 years old) have been found, or are likely to have survived, and the condition of such papyri before they are unrolled is very different from that of the supple leather of the new manuscript, which, however, is not unlike the forged manuscripts which have been offered for sale at Nâblus. It is quite a misnomer to speak of Mr. Shapira's leaves as embalmed, although they are said to have been found with a mummy.

"As regards the same mummy, I would ask, finally, whether this assertion alone is not sufficiently suspicious. Exploration has shown us that the Jews, the Israelites, and the Phœnicians never mummified the dead. Their tombs are not constructed to contain mummy cases. East of Jordan the survey party found that the Moabites used the same tombs as the Jews, and even smaller chambers in rocks. We should be forced, then, to conclude that an Egyptian was buried in the Moabite desert, after being converted to Judaism by some unknown sect, who wrote in the Dibon alphabet, and not in that of Western Palestine, as now known in the Siloam Inscription. A more improbable set of assumptions could hardly be conceived, yet the difficulty of the great age which it is necessary to suppose leather to be able to attain without rotting in a damp cave is even more fatal to this clever forgery."

"CLAUDE R. CONDER, R.E."

"Guildford, Aug. 18."

On the 25th another note from M. Clermont-Ganneau was published, giving a diagram showing the folds of the skin, the sutures, &c.

Lastly, the following paper on the subject, written by Dr. Ginsburg to Dr. Bond, of the British Museum, was published in the *Times* of August 27th. It has only to be added that it is now said that the German Professors in Berlin to whom Shapira showed the skins, immediately discovered that the writing was a forgery. That may be so, but no one thought fit to publish his opinion until there was no longer any doubt on the subject existing among English scholars.

"August 22, 1883.

"The manuscript of Deuteronomy which Mr. Shapira submitted to us or examination is a forgery.

"As the interest which it has excited is so great, and as the public are waiting to hear the result of our investigation, I shall endeavour to give my reasons for the conclusion I arrived at in as popular a manner as the essentially technical nature of the subject will admit.

"The writing of the manuscript exhibits the oldest alphabetical characters hitherto known. The letters greatly resemble those on the Moabite Stone, *circa* B.C. 900. The document, therefore, pretends to be about B.C. 800-900. This conclusion cannot be set aside by the supposition that extremely archaic forms may have been retained in some districts, either in the east or west of the Jordan, and that the manuscript may therefore only claim to be of about B.C. 200-300. The pretence to extreme antiquity is confirmed by the fact that the text of Deuteronomy in its present form was substantially the same *circa* B.C. 300. This is attested by the Septuagint version of the Pentateuch, which, as is generally admitted, was made about that time. As the Shapira manuscript pretends to give an entirely different recension, it presumably claims to exhibit a text prior to B.C. 300.

"The evidence which to my mind convicts the manuscript as a modern forgery is of a twofold nature—viz., external and internal.

"I. The narrow slips of leather on which it is written are cut off from the margin of synagogue scrolls. According to an ancient practice, the Jews in all parts of the world read the Sabbatical lessons from the Pentateuch from manuscript scrolls. Owing to partial defacement or damage, these scrolls frequently become illegal, and are withdrawn from public use. And although the Jews as a rule guard these sacred relics against profanation, and deposit them in receptacles abutting on the synagogues, still the communities in the East, and especially in South Arabia, are driven by poverty to part with them. Hence almost every public library in Europe, and many private collectors, possess such disused parchments or skins belonging to different ages, ranging from the eleventh to the nineteenth century. On the 24th of November, 1877, the British Museum bought a number of these scrolls from Mr. Shapira, which he brought from Yemen. The remarkable part about these scrolls is that (1) some of them are written on similar rough sheepskins to the material on which the Deuteronomy slips are written; (2) the lower margin of some of these scrolls (Comp. Oriental, 1452; Oriental, 1453; Oriental, 1454; Oriental, 1459; Oriental, 1465) is the same width as the height of the Shapira slips; and (3) one of these scrolls—viz., Oriental, 1457, has actually such a cut-off slip fastened to the beginning of Genesis—and this scroll was bought from Mr. Shapira in 1877, the very year in which he declares that he obtained the inscribed slips.

"II. The columns of these scrolls are bounded on the right and left by vertical lines drawn with a hard point. These lines not only extend from the top to the bottom of the written portion, but reach to the very end of

the leather, right across the upper and lower margins. Now, the Shapira fragments exhibit these lines with the dry point, but not as boundaries to the margin, for the writing on them extends on each side beyond the lines, thus confirming the theory that they originally formed the ruled margins of legally written scrolls. What is still more remarkable is the fact that the uninscribed slip already mentioned has also these guiding lines, and that they correspond to the inscribed Shapira fragments.

"III. The upper and lower margins are very rough, ragged, and worn in the old scrolls, as will be seen in scroll Oriental, 1456, and Oriental, 1457. Now, many of the Shapira slips are only ragged at the bottom, but straight at the top, thus plainly showing that they have been comparatively recently cut off from the scrolls, since they have not had time to become ragged at the top.

"IV. Some of the slips show plainly that they have been covered by a frame which inclosed the writing, and that this frame was filled with chemical agents. The result of this is to be seen in the fact that, while the inscribed part has thereby been rendered perfectly black and shiny, the part of the leather covered by the frame is of a different and fresher colour, and exhibits the shape of the frame.

"As to the internal evidence, it will be seen from the following analysis of the documents that there were no less than four or five different persons engaged in the production of the forgery, and that the compiler of the Hebrew text was a Polish, Russian, or German Jew, or one who had learned Hebrew in the North of Europe.

"I. Taking for granted that because the canonical text already contains two recensions of the Decalogue, no insurmountable objection would be raised against a third recension, provided it exhibited the Biblical precepts, the forger manifestly made the Ten Commandments the groundwork of his text. Accordingly, he not only modelled the Decalogue after the pattern of Leviticus xviii and xix, but derived his additions from those chapters. Thus the refrain 'I am God thy God,' which he inserted ten times, is simply a variation of the longer refrain 'I am the Lord your God,' which occurs exactly ten times at the end of ten precepts or groups of precepts in Leviticus (xviii, 2, 4, 30 ; xix, 2, 3, 4, 10, 25, 31, 34). Again, what is here the Seventh Commandment is made up from Leviticus xix, 12, while the additional Tenth Commandment is simply Leviticus xix, 17.

"II. Though Deuteronomy xxvii, 11-14 orders that the representatives of the twelve tribes are to place themselves on Mount Gerizim and Mount Ebal, in order to recite the blessings and the curses for the observance and the transgression of certain precepts, yet the maledictions only are given (verses 15-26). This manifestly suggested to the forger the idea of supplying the benedictions. In accordance with his plan, therefore, he not only filled up the gap with ten beatitudes, but made these ten benedictions harmonise with his version of the Ten Commandments.

"III. Equally manifest is his design in altering the maledictions contained in the canonical text of Deuteronomy xxvii, 15-26. The additions,

omissions, and insertions in the Shapira slips are palpably so framed as to yield ten maledictions to range round the Ten Commandments according to the forger's version of them.

"To impart to the document the appearance of antiquity, the forger not only imitated closely the archaic writing of the inscription on the Moabite Stone, but adopted the expressions which are to be found on this lapidary document. Thus, for instance, in the Decalogue, which, as I have already shown, forms the central point of the forged text, the forger not only separated the words, but put a full stop after every expression, exactly as it is on the Moabite Stone; the only exceptions being the particles *eth*, which is the sign of the accusative, and *lo*, which is the negative. That the forger used the Moabite Inscription as a model is, moreover, to be seen from the following facts. He exchanged the word rendered 'before time' in the Authorised Version (Deut. ii, 12) for the word *meolam*—'from of old,' because it occurs in this ancient inscription. Again, in describing the Moabite territory, the forger mentions Moab, Aroer, Jahaz, and the Arnon, because these four names are to be found on the Moabite Stone; but he omits Paran, Tophel, Laban, Hazeroth, and Dizahab (which occur in Deut. i, 1) simply because they are not to be found in the Moabite Inscription.

"V. My reason for concluding that the compiler of the text was a Jew from the North of Europe is that certain errors in spelling which occur in this document can only be accounted for on this hypothesis. Thus the Jews in Poland, Russia, and Germany pronounce the undageshed *caph* and the gattural letter *cheth* alike. Hence, when the compiler of the text dictated to the scribe the word *chebel*, the latter spelled it *kobel*, with *caph*; and *vice versa*, when the compiler told him to write the expression which denotes 'of their drink-offerings,' and which is written with *caph*, the copyist spelled it with *cheth*. In the North of Europe, moreover, the Jews pronounce alike the letters *teth* and *tau*. This accounts for the otherwise inexplicable spelling in this document of the word rendered 'frontlets' in our Authorised Version.

"VI. The compiler of the text, who was a tolerable adept in writing Hebrew, could not have been familiar with the Phoenician characters exhibited in these slips, or he would assuredly have read over the transcript and have detected those errors. He would especially have noticed the transposition of the two letters in the predicate applied to God, which, instead of saying He was 'angry,' declares that He 'committed adultery.'

"From the fact that the slips exhibit two distinct hand-writings, I conclude that there were two scribes employed in copying them. These, with the compiler of the Hebrew text and the chemist who manipulated the slips, account for my remark that there were four or five persons engaged in the forgery.

"CHRISTIAN D. GINSBURG."

## THE SILOAM INSCRIPTION.

I HAVE allowed two years to pass without writing again on the Siloam Inscription, partly because it was being well looked after by German scholars, partly also from want of leisure. Thanks to the labours of Dr. Guthe the text of it is now as fairly established as it ever will be, and the casts that are in Europe permit it to be examined with that minute care which the actual position of the inscription makes almost impossible. I must begin by formally retracting my objections to the readings **אמת** and **בביאתיהם** in the second and fifth lines which I urged two years ago. The casts leave no doubt that I was wrong, and Dr. Guthe right. In most other points I agree with the readings and interpretation of the German scholars, as embodied in Dr. Guthe's article in the "Zeitschrift der Deutschen Morgenländischen Gesellschaft," xxxvi, 3, 4. I should now, therefore, give the following translation of the text :—

1. "(Behold) the excavation ! Now this had been the history of the excavation. While the workmen were still lifting up
2. "the axe, each towards his neighbour, and while three cubits still remained to (cut through), (each heard) the voice of the other who called
3. "to his neighbour since there was an excess in the rock on the right hand and on (the left). And on the day of the
4. "excavation the workmen struck, each to meet his neighbour, axe against axe, and there flowed
5. "the waters from the spring to the pool for a thousand two hundred cubits ; and . . .
6. "of a cubit was the height of the rock over the heads of the workmen."

The most curious thing about the inscription is the absence in it of any proper name. The name neither of the king who caused the tunnel to be made, nor of the engineer who executed the work, is mentioned. The omission is rendered all the more curious by the fact that the upper part of the tablet in which the inscription is engraved is left bare, the inscription beginning about half-way down—in fact, just where it would be concealed by the water. There seems only one possible explanation of strange a circumstance. There must have been an official quarrel, and the engineer, naturally desirous of commemorating the feat he had performed, engraved the record of it in a place where it would not be discovered. At the same time I do not understand why he should not have recorded his own name.

The question as to the date of the inscription is no nearer settlement than it was two years ago. It is pretty well agreed now that no argument can be derived from the form of the letters—except in so far as they prove that the inscription is older than the middle of the sixth century, B.C., —since we have no early Hebrew monuments with which to compare

them. The question must be decided on historical, and not on palaeographical grounds.

Now we gather from the Books of Kings and Chronicles that there were only two building periods in the pre-exilic history of Jerusalem—those, namely, of Solomon and Hezekiah. The majority of those who have commented on the inscription ascribe it to the age of Hezekiah; I am still inclined, with hesitation, to assign it to the age of Solomon. Canon Birch, in the last number but one of the *Quarterly Statement*, seems to think that the matter can be easily disposed of by a simple reference to the fact that 2 Kings xx, 20, speaks of “the pool,” and “the conduit.” But there is all the difference in the world between referring to “the pool” and “the conduit” which Hezekiah made, and the statement of the inscription that the waters flowed “from the spring to the pool.” Here “the pool” is correlated to “the spring,” or “exit,” and no one, I suppose, will assert that there was more than one spring. Moreover, the word translated “conduit” is חעלָה, which is not the same as the נקבָה, or “tunnel,” of the inscription. On the other hand, the passage in Kings goes on to add that Hezekiah “brought the water to (*not* into) the city,” which the chronicler (2 Chron. xxxii, 30) supplements by saying that it was “directed downwards on the west side of the city of David,” after that the “exit,” or “spring of the waters of the upper Gihon,” had been sealed up. This would exactly suit the position of the Pool of Siloam.

It would also suit, though not so well, the tunnel discovered by Colonel Warren, which leads, like the Siloam Tunnel, into the Virgin’s Spring. This second tunnel ends in a perpendicular shaft, which communicates with another subterranean passage, partly sloping, partly horizontal, the whole terminating in a flight of steps in a vaulted chamber cut out of the rock. The Roman lamps and other relics found in the chamber and passage show that the tunnel was used by the inhabitants for obtaining water up to a late period. Now this second tunnel best suits the verb “he directed,” employed by the chronicler, whereas the adverb “downwards” applies naturally to the Siloam conduit.

It must, however, be remembered that this second tunnel is in connection with the Siloam one, a perpendicular shaft descending to the latter below the vaulted chamber, and appears, therefore, to be of later origin. The overflow of the water in it, in fact, must have made its way through the Siloam aqueduct into the Siloam Pool. It is obviously to this tunnel that we should have to apply the passage in Kings if it stood alone.

Whatever, however, may be thought of the statements in the Books of Kings and Chronicles, I do not see how it is possible to explain away the words of Isaiah, who writes of the topography of Jerusalem, not as it existed some centuries earlier, but as it was in his own day. What Mr. Birch means by a “newly-found aqueduct,” in addition to the Siloam Tunnel, I fail to comprehend any more than Captain Conder, “since,” as the latter remarks, “there is but one aqueduct from the Virgin’s Fountain to Siloam—that, namely, in which the inscription is engraved.” Now in

a prophecy delivered during the reign of Ahaz, Isaiah (viii, 6) contrasts the waters of Shiloah, that go softly," with the Euphrates (or rather Tigris). Unless the Kidron is referred to, only the Siloam Tunnel can be meant, since there was no other "softly-flowing" watercourse in or near Jerusalem. And that the Kidron is not referred to is shown partly by the epithet given to the waters, partly by the name Shiloah, which signifies an artificial aqueduct. But this passage does not stand alone. In Isaiah vii, 3, the prophet states that he was directed to meet Ahaz "at the end of the conduit of the Upper Pool, in the highway of the fuller's field." Now the topography of Jerusalem makes it clear that the fuller's field could have been only at the southern entrance into the Tyropœon valley, where water for fulling could be obtained from the Kidron and En-rogel, the modern Bir Eyyub, as well as a strip of level ground. This is fully confirmed by the name of En-rogel, "the fuller's fountain." Consequently, on the road from the city towards En-rogel, a conduit must have led from an upper pool into a lower one, which is called the Lower Pool in Isaiah xxii, 9. This conduit can only be the rock-cut channel which still leads from the Pool of Siloam into the old reservoir below. As Isaiah, in the passage just quoted, ascribes the construction of the Lower Pool to Hezekiah, I am inclined to think that this is really the reservoir referred to in 2 Kings xx, 20, and that the chronicler has confused "the exit of the waters of the upper Gihon," or "spring," from which the water originally came, with the Upper Pool of Siloam. It is, however, possible that he merely means to say that Hezekiah, after sealing up the Virgin's Spring, lengthened the channel through which its waters were conveyed into the city, and so "directed them downwards on the west side of the city of David." Perhaps, indeed, this is the most natural interpretation of his words. Dr. Guthe has discovered the remains of four other old reservoirs in the neighbourhood of the Pool of Siloam, all of which may have been supplied with water from the Siloam Tunnel. If these had existed, or, indeed, if only the Lower Pool had existed at the time the inscription was written, it is difficult to understand how the Siloam Pool could have been termed "*the pool*." In fact, if the reservoirs discovered by Dr. Guthe were supplied with the refuse-water of the Upper Pool, as the Lower Pool certainly was, the Upper Pool must have been the first of them that was made.

My conclusions are, then, the following. The passage in 2 Kings xx, 20, applies most naturally to Colonel Warren's tunnel. That in 2 Chronicles xxxii, 30, must be interpreted of the Lower Pool of Siloam. The contemporary references of Isaiah (vii, 3 ; viii, 6 ; xxii, 9) apply only to the Siloam Tunnel, the Siloam Pool, and the Lower Pool, which was repaired by Hezekiah, who changed it from a rain-water cistern into a reservoir supplied with water from the Siloam Tunnel.<sup>1</sup> The Siloam Tunnel must consequently have been in existence before the time of Ahaz, and since

<sup>1</sup> I do not see what other sense can be attached to the expression, "ye collected the waters." Besides, an Upper Pool already existed in the time of Ahaz (Isa. vii, 3).

the only great builder known to the Books of Kings before that epoch was Solomon, we are justified in ascribing the construction of it to him. After all, this conclusion is only in harmony with probabilities. When Solomon was executing great public works in Jerusalem, and completing its fortifications, it is hardly likely that he would have allowed his capital to depend only upon rain-water in time of siege. Dr. Guthe has pointed out that, according to the Septuagint, Solomon "cut through the city of David."

Why then, it will be asked, is no mention made of the excavation of the conduit among the other works of Solomon? I will reply by asking another question: Why is it that no king is mentioned in the Siloam Inscription? The answer in each case must be the same—there had been an official quarrel, and the fame of the engineer who "cut through the city of David" was not allowed to go down to posterity.

I can see only one valid objection to the conclusion at which I have arrived. Solomon's workmen were Phoenicians, and nevertheless the Siloam Inscription is in the purest Hebrew. But it must be remembered that it was only Hiram, the brassfounder, and the Sidonian hewers of timber that came from Phœnicia; the stonecutters were partly Tyrians and Gebalites, partly Hebrews (1 Kings v, 18).

Whether or not, however, the Siloam inscription can be assigned to a precise chronological period, it has, I believe, thrown most important light on the topography of pre-exilic Jerusalem. Mr. Birch seems to me indubitably right in holding that the city of David stood on the so-called hill of Ophel. In fact no other view is now possible. But it further follows from this that the Tyropœon valley was the valley of the son of Hinnom. This will explain why the older name of the Tyropœon has never hitherto been discovered, and it will also explain why the tombs of the Jewish kings have not been found. They lie concealed under the rubbish that covers the southern slope of Ophel. If we are to discover the relics of royal Jerusalem we must excavate the Tyropœon valley, at the bottom of which probably lie the ruins that were thrown into it by the soldiers of Nebuchadnezzar.<sup>1</sup>

The hill on which the city of David stood was the original Mount Zion, a name which was afterwards extended to the Temple-hill, the proper designation of which seems to have been Moriah (or Moreh?); see 2 Chronicles iii, 1; Genesis xxii, 2, 14. Here I believe to have been the city of Jebus. At all events, the proverb quoted in 2 Samuel v, 8—"the blind and the lame shall not enter the temple"—implies that the

<sup>1</sup> The determination of the position of the valley of the son of Hinnom settles that of "the mountain that is over against the valley of Hinnom westward, which is at the end of the valley of Rephaim northward" (Josh. xv, 8; xviii, 16). This mountain is either Bezetha, or that on which the Church of the Holy Sepulchre stands, or that to the south of it, which has been erroneously identified with Zion. It is more probably the last. Professor Robertson Smith has already pointed out in the "Encyclopædia Britannica" that the valley of the son of Hinnom must be represented by the Tyropœon.

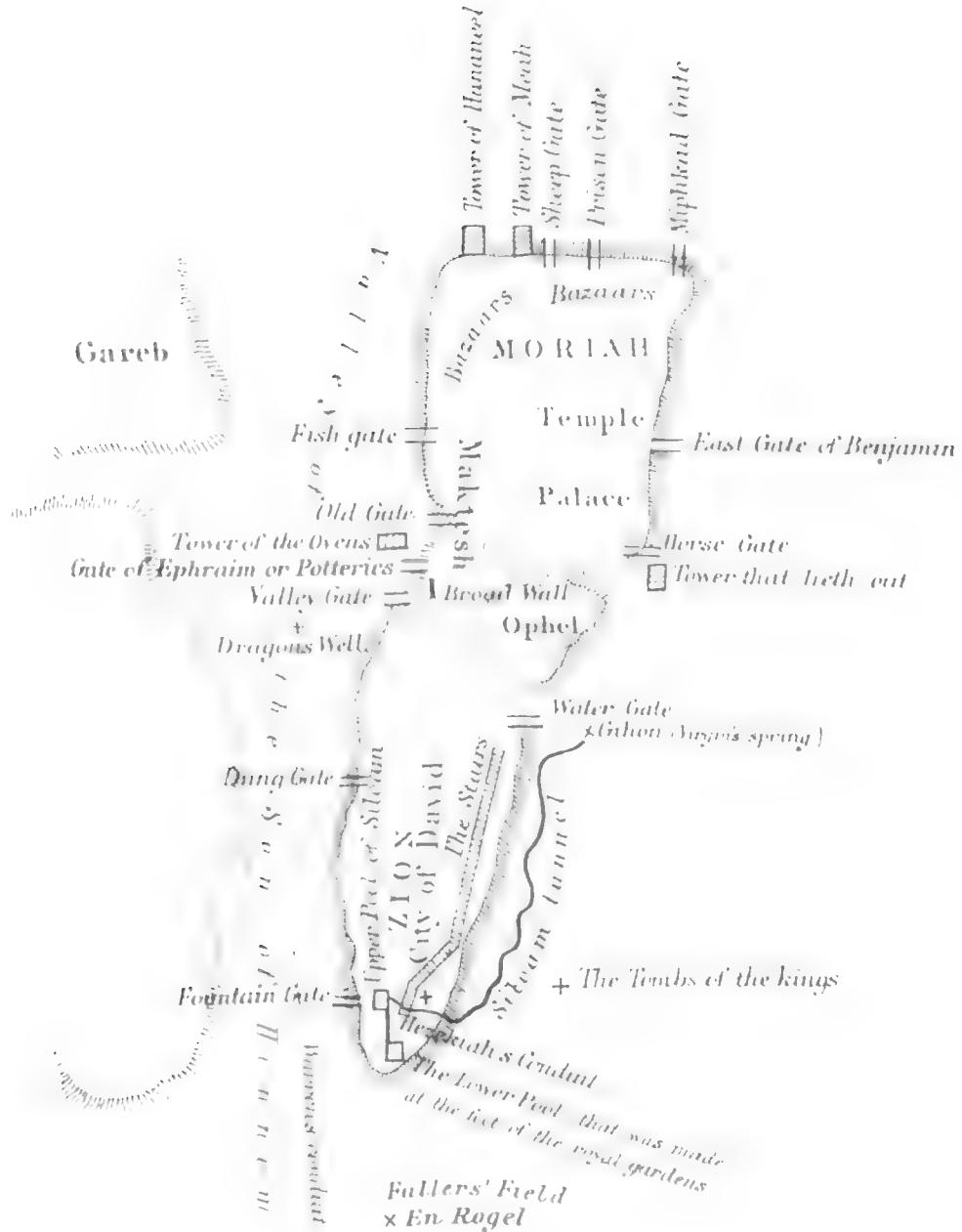
Jebusites, whose city was stormed, inhabited the higher Temple-hill. David had already that day taken "the stronghold of Zion" on the lower hill.<sup>1</sup> This stronghold was merely an outpost, or isolated tower, and it was accordingly on the lower uninhabited hill that David built his new city, named in consequence "the city of David." The Jebusites still continued to live on the higher hill of Moriah, as we may infer from the fact that Araunah had his private threshing-floor there towards the close of David's reign. This will explain why we find so many cisterns on the area of the Harám. When Solomon swept away the houses of the old Jebusite city to make room for his palaces and the temple, he reduced their inhabitants to a state of serfdom (1 Kings ix, 20, 21), and transferred them, under the name of Nethinim, or "Temple-servants," to Ophel, the north-eastern portion of Mount Zion (see Nehemiah iii, 26, 31).<sup>2</sup> Between Moriah and Zion Dr. Guthe has found traces of an old valley which opened into the valley of the Kidron, not far from the Virgin's Spring. Here must have been the two walls between which Hezekiah made the "gathering-place," or tank, "for the water of the old pool" (Isa. xxii, 11), and here, too, was the gate through which Zedekiah fled along the valley of the son of Hinnom, "by the way of the king's garden," past En-rogel and Mar-Saba, to the plain of Jericho (Jer. xxxix, 4; lii, 7). This gate was probably the "Potteries' Gate" of Jeremiah xix, 2.

The enclosure of Moriah and Zion within a single wall created the city of Jerusalem. The name is written Ur-salímu, or "city of peace," in the Assyrian inscriptions, which goes to show that those scholars are right who have supposed the name to signify "the peaceful town," in spite of

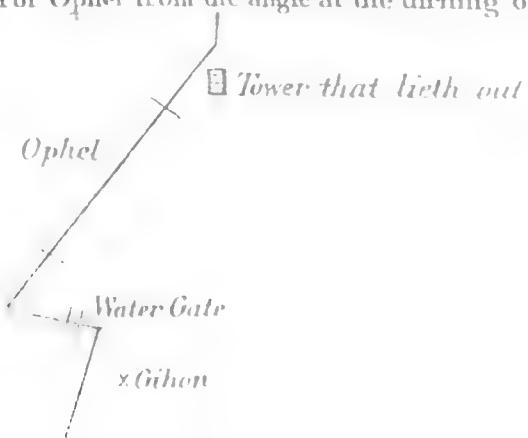
<sup>1</sup> *Metsudháh* and *metsádh* are always used of isolated forts, situated in uninhabited spots. That Jebus, or the city of the Jebusites, occupied Moriah is further indicated in Joshua xv, 8 (and xviii, 16), where we read that "the border went up by the valley of the son of Hinnom to the shoulder of the Jebusite from the south; that is, Jerusalem." The "south" is explained by the previous verse to be En-rogel (the Bir Eyyub). "The shoulder of the Jebusite" will be the spur of Zion, on which the "stronghold stood." Its proper name may have been Eleph; see Joshua xviii, 28—"Eleph and the Jebusite, which is Jerusalem," and Zechariah ix, 7, where Halévy proposes to read, "he shall be as Eleph in Judah, and Ekron as Jebusi." According to Joshua xv, 63, the Jews lived along with the Jebusites at Jerusalem; according to Judges i, 21, the Benjamites did so, but in Judges xix, 10-12, Jebus is "the city of a stranger." However, we find both Jews and Benjamites in Jerusalem in Nehemiah xi, 4, and 1 Chronicles ix, 3.

<sup>2</sup> We learn from Ezra viii, 20, that some of the Nethinim had been "given" by David to the service of the Levites before the temple had been begun; in Nehemiah vii, 46-60, these are carefully distinguished from "Solomon's servants." The first seem to have been the Jebusites who were taken by David with arms upon them; the second to have been those who, like Araunah, were allowed to live in their old quarters until after David's death. Besides the colony of the Nethinim on Ophel there were others who inhabited the portion of the Temple-hill north of the Temple.





Sketch-map of the well of Ophel from the angle at the turning of the corner:-



the difficulty occasioned by the loss of the 'ain in the first element of which it is composed. I am however more inclined to see in this first element a play upon Yĕru, "a cairn," which we may gather from Genesis xxii ("in the mount of the Lord is יְרָאָה") was the name of a locality on Moriah. Isaiah (xxix, 1, 2) similarly plays on the name by turning it into Ari-el. The title "city of peace" may well have been given to David's capital when his foreign wars had been ended, and the name of Solomon, "the peaceful," had been given to his son Jedidiah. The dual form Yĕrushalaim, which apparently goes back to the time of the Macchabees, probably refers to the old division of Jerusalem into the lower city and the Temple-hill.

A. H. SAYCE.

## THE TOPOGRAPHY OF PRÆ-EXILIC JERUSALEM.

In my paper on the Siloam Inscription, I have tried to show how closely the question of the date to which the inscription is to be assigned is connected with that of the topography of ancient Jerusalem. The key to the whole position is the fact that the south-eastern hill, the so-called Ophel, represents Zion, the City of David. This fact once granted—and it is now no longer possible to deny it—not only does the rest of the topography of præ-exilic Jerusalem become clear, but the Solomonic date of the Siloam Inscription, as it seems to me, follows unavoidably. It may assist the reader if I here summarise the arguments which I have urged in its behalf.

(1) Our knowledge of the water-supply of ancient Jerusalem is derived from three passages of Isaiah, a passage in the Books of Kings, and another in the Books of Chronicles. Only the first three passages are contemporaneous with the state of things to which they allude; their testimony is therefore superior to that of the other two passages, and should be considered first.

(2) According to Isaiah vii, 3, in the time of Ahaz, the prophet met the king "at the end of the conduit of the upper pool, in the highway of the fuller's field" (see also Isaiah xxxvi, 2). The fuller's field adjoined the Bir Eyyûb; the upper pool, consequently, must be the Pool of Siloam, and the conduit the tunnel which conducts the water into it.

(3) In Isaiah viii, 6, also in the time of Ahaz, the prophet refers to "the waters of Shiloah that go softly," in contrast to the waters of the Tigris. The only softly-going waters at Jerusalem, conducted through the Shiloah, or "artificial aqueduct," were those of the Siloam Tunnel.

(4) In Isaiah xxii, 9, at the time of the invasion of Sargon (B.C. 711), and consequently in the reign of Hezekiah, the Jews are said to have "gathered together the waters of the lower pool." As "the lower pool" implies an "upper pool," the lower Pool of Siloam must be meant, and the

collecting of the waters in it must refer to some work by which it was supplied with water from the Virgin's Spring (the only spring in or near Jerusalem), instead of depending, as before, upon the rainfall alone. That is to say, the conduit which leads from the upper to the lower Pool of Siloam must have been cut through the rock at this time.

(5) This is expressly stated in 2 Chronicles xxxii, 30, unless this passage is to be interpreted in a sense contradictory to the evidence of Isaiah. The chronicler tells us that after sealing up "the exit of the waters of the Upper Gihon," which was outside the walls (see verse 3), Hezekiah directed them in a straight line, downwards, on the western side of the City of David. There is no other watercourse except the conduit leading from the upper to the lower Pool of Siloam which answers to this description.

(6) The passage in 2 Kings xx, 20—Hezekiah "brought water citywards"—is too vague for any conclusions to be drawn from it, though it would most naturally refer to Warren's tunnel.

(7) The Siloam Tunnel must, therefore, have existed in the reign of Ahaz, and since we know of no Jewish king before Hezekiah who was a great builder, except Solomon, we are justified in ascribing its construction to him.

(8) This is confirmed by the Septuagint version of 1 Kings iii, which states that Solomon "cut through the City of David," an expression which can apply only to the Siloam Tunnel.

(9) It is, moreover, most improbable that Solomon, who constructed the fortifications of Jerusalem, should have allowed the only spring in the neighbourhood of his capital to remain outside the walls, without attempting to supply the city with something less precarious in time of siege than rain-water.

I have already remarked that, as Dr. Guthe and Mr. Birch have observed, the Upper Gihon of the chronicler, with its *motsâ*, or "exit," must be the Virgin's Spring, the *motsâ* of which is mentioned in the Siloam Inscription. Indeed, since Gihon means "a natural spring," it is hard to understand how any one with a knowledge of Hebrew could ever have supposed that it represented an artificial reservoir. Dr. Guthe has evidently hit upon the right explanation of the epithet "upper," which is applied to it. The compiler of the Books of Kings still knew only of one Gihon (1 Kings i, 33, 45; so also 2 Chron. xxxiii, 14); but after the exile what Isaiah called "the end of the conduit" came to be regarded as a second spring of water, in consequence of the aqueduct made by Hezekiah to the lower pool, so that the Virgin's Spring—that is to say, the original Gihon—was termed the Upper Gihon, and the lower outlet of the Siloam Tunnel the Lower Gihon, or perhaps Gihon simply.

Dr. Guthe's recent excavations and researches have brought to light two important facts. First of all, the Solomonic wall of Jerusalem enclosed both the upper and the lower Pools of Siloam; and secondly, a valley or depression formerly ran from the Tyropœon to the Kidron valley, entering the latter a little above the Virgin's Spring. With these

facts in our hands, we can, I believe, restore the topography of Jerusalem as it existed in the time of the Kings.

As I have already pointed out, and as Professor Robertson Smith has perceived, the determination of the City of David shows that the Tyropœon was the old valley of the son of Hinnom. Into this the western gates of the præ-exilic Jerusalem must have opened. What these gates were we learn from Nehemiah.

Nehemiah "went out by night by the gate of the valley, even before the dragon-well" (Neh. ii, 13). We gather from chapter iii that this gate was on the same side of the city as the Pool of Siloah, so that "the valley" must be the Tyropeon. It is called **הַנִּיא**, in contradistinction to "the brook-valley" (**הַפְּתַח**) of the Kidron. Jeremiah (xxxii, 40) terms it "the vale (*ēmek*) of the dead bodies and of the ashes," since it was to be choked with the ashes of Jerusalem, and the corpses of its defenders, by way of punishment for the human victims that had been burnt in it to Moloch (see Jer. xix, 6, 7, 11–13). The dragon-well must now be buried under the rubbish that fills the valley. Possibly it stood in connection with the old rock-cut drain or conduit discovered by Warren on the western side of the south-eastern hill.

As Nehemiah had to pass "the dung port" and "the gate of the fountain" before he reached the brook Kidron (ii, 13–15), it is plain that those two gates must also have opened into the Tyropœon. This gives us a clue to the position of the gates enumerated in chapter iii, which I shall now examine in detail.

Nehemiah here begins with the sheep-gate, and the towers of Meah and Hananeel, which defended it on the western side (Neh. xii, 39). As the sheep gate is mentioned in John v, 2, its position has long been recognised on the northern side of the Temple-hill (Moriah). This agrees with the fact that its restoration was undertaken by "Eliashib the high priest, with his brethren the priests," the natural guardians of the Temple-hill. Since Jeremiah (xxxii, 38) describes Jerusalem as extending from the tower of Hananeel to the gate of the corner in the extreme south-east, it must have been the most northern portion of the city, lying probably on the north-west, and thus occupying the site of the later tower of Antonia. See also Zechariah xiv, 10 (where "the king's winepresses" would naturally be in the king's garden, at the mouth of the Tyropeon).

The next gate mentioned by Nehemiah is the fish-gate (verse 3). This must have been on the west side of Moriah, and have opened into the Tyropœon, since the enumeration proceeds, after the notice of two or three more gates, to the mention of the valley-gate (verse 13), and the pool of Siloah by the king's garden (verse 15); we must therefore be moving from north to south on the western side of the city. According to 2 Chronicles xxxiii, 14, Manasseh built a wall all round the fortified part of the City of David, beginning with the sloping cliff west of the Virgin's Spring, which is described as "in the brook valley" of the Kidron, and ending with the fish-gate, from which it would appear that the fish-gate stood at the

western exit of the valley discovered by Dr. Guthe, which separated Zion from Moriah. Hence we can understand why Zephaniah (i, 10, 11) associates it with Maktesh, the merchant quarter of Jerusalem, and contrasts the “cry” heard from it with the “great crashing from the hills” on either side. Maktesh is further called the “second” city by Zephaniah, and it was here that Huldah lived, according to 2 Kings xxii, 14 (where the Authorised Version mistranslates “college”), the full expression appearing in Nehemiah xi, 9, where we read that “Judah, the son of Senuah, was over the second city.”<sup>1</sup> The foreign merchants are termed by Zephaniah “the people of Canaan,” or Phœnicia, and according to Nehemiah xiii, 16, “men of Tyre” dwelt in Jerusalem, “which brought fish.” Hence, evidently, the name of the gate, which was the nearest and most accessible to travellers who approached the city from the sea-coast.

The “old gate” (verse 6) may have been the one by which the Jebusite town was entered. To the south of it came “the throne of the governor beyond the river”—which was possibly set up in the *birah* or “castle adjoining the temple” (Neh. ii, 8 ; vii, 2),—and “the broad wall.” This protected the bazaars of the goldsmiths and perfumers (verse 8). Here “the half part of Jerusalem” seems to have ended, since the next piece of wall was built by “Rephaiah, the son of Hur, the ruler of the half part of Jerusalem;” while after a short interval, which was mainly filled with “the tower of the furnaces,” the wall was continued by “Shallum, the son of Halohesh, the ruler of the half part of Jerusalem.” At this point, we may assume, Zion, or the City of David, was supposed to begin.

The “tower of the furnaces,” or rather “ovens,” was probably near “the bakers’ street” (Jer. xxxvii, 21). Here, at any rate, were the public ovens, built of the clay found in the valley below. It must have been in this part of the Tyropœon that the potteries were situated, which gave their name to “the gate of the potteries,” mistranslated “east gate” in the A. V. (Jer. xix, 2). The gate of the potteries seems to be the valley-gate of Nehemiah, which, like the gate of the potteries, led immediately into the valley beneath. This valley-gate lay a thousand cubits to the north of the dung-gate (verse 13), so called, perhaps, from the dung which was here thrown over the cliff into the valley. South of it was “the gate of the fountain,” and south of that the wall which enclosed “the pool of Siloah” (or, rather, “the aqueduct”) “by the king’s garden,” and extended “as far as the stairs that go down from the City of David” (verse 15). Remains of these stairs have been discovered by Schick and Guthe a little to the east of the Pool of Siloam, and Dr. Guthe points out that they must have run as far as a point, inside the walls, a little to the south of the Virgin’s Spring, since he has found traces of steps here. In the preceding chapter (ii, 14) Nehemiah has called “the pool of the aqueduct” (or “the Siloah”) “the king’s pool,” from which we may infer that the king’s pool was so named

<sup>1</sup> It would appear from this that Moriah was divided into two quarters, the first, on the south-eastern side, being known as the upper or “first city,” while “the second city” lay below it on the west.

from its adjoining the king's garden. We learn from Nehemiah xii, 37, that the stairs led by "the house of David," which may be "the tower of David" mentioned in Cant. iv, 4, and used as an armoury, under which name it is alluded to in Nehemiah iii, 19. At all events the garden attached to David's palace must have lain on the slope or at the foot of the hill on which the palace stood, and was not likely to have been resigned by Solomon when he transferred his residence to the temple-hill. The king, therefore, after whom the garden and the reservoir were named, would have been either David or Solomon. I believe that the garden is the same, or partly the same, as that called "the garden of Uzza" in 2 Kings xxi, 18, 26, which could not have been far from the sepulchres of David, in which the successors of Hezekiah were not buried apparently because there was no longer sufficient room. We hear of an Uzza in 2 Samuel vi, and 1 Chronicles xiii, who died while touching the ark close to the threshing-floor of Nachon or Chidon, the spot being consequently called Perez-Uzzah. The threshing-floor must have been in a level but breezy spot, such as that at the entrance of the Tyropeon, and the context shows that it must have been close to the ascent to the City of David. I conclude, therefore, that when Manasseh built the outer wall round the City of David (2 Chron. xxxiii, 14), he built also a house for himself in the place known as the garden of Uzza, both garden and house being enclosed by the new wall.<sup>1</sup> It is, perhaps, a fragment of this wall that has been discovered by Colonel Warren south of the Birket el-kamra.

The fountain-gate may have derived its name from the Pool of Siloam, though I am more inclined to think that the fountain meant was that of En-rogel, the modern Bir Eyyûb. It was the nearest gate to the latter, and probably opened upon "the highway of the fuller's field." It must have been just outside it that Isaiah met Ahaz (Isa. vii, 3), and that the Rab-shakeh delivered the message of Sennacherib to Eliakim, Shebna, and Joah, who had "gone forth to him" (Isa. xxxvi, 3).

The piece of wall following that which protected the Pool of Siloam extended "to the pool that was made and the house of the warriors," and was "in sight of the sepulchres of David." These were hewn in the cliffs above it, as we learn from 2 Chronicles xxxii, 33 ("the ascent of the sepulchres of the sons of David"), and Isaiah xxii, 16, and were accordingly enclosed by the wall. The position assigned to them by Nehemiah shows that Professor Robertson Smith is wrong in transferring the tombs to the neighbourhood of the temple-hill on the strength of Ezekiel xlivi, 7, 9. Ezekiel merely declares here that the whole of the new Jerusalem, and not the temple-hill only, shall be dedicated to God, and, consequently, that no part of it shall be defiled henceforward by the corpses of its kings. There is nothing to indicate in what precise part of the city the tombs were.

The localisation of the royal sepulchres explains, as I have already

<sup>1</sup> Manasseh's building operations took place after his return from Babylon. Possibly he found the old palace on Moriah in a ruinous condition, and while restoring it occupied David's house in the lower city.

remarked, why they have never yet been found. Only excavation can bring them to light. It also explains why David originally fixed upon this particular site as the burying-place of himself and his family. It adjoined his palace, and doubtless formed part of the ground belonging to it. We learn from the cuneiform records that the Babylonian kings were buried within the precincts of their palaces, and that this was also the case at Jerusalem is shown by 2 Kings xxi, 18; 2 Chronicles xxxiii, 20. The "house of the warriors" must have been the barracks of David's body-guard, whose technical title was *Gibborim* (2 Sam. xxiii, 8; cf. xi, 9).

It follows from the description of Nehemiah that "the pool that was made" was the lower Pool of Siloam. Now it has long been recognised that this pool was the one enlarged by Hezekiah, and provided with fresh water by means of his conduit. Here, therefore, is another proof that the pool constructed by Hezekiah was the lower Pool of Siloam, and that his conduit is not the Siloam Tunnel, but the aqueduct which leads from it to the lower reservoir. The remains of the pool have been found by Dr. Guthe close to Isaiah's tree, and since the city wall forms one of the walls of the reservoir, the latter must have been constructed after the completion of the walls. Indeed, Dr. Guthe has discovered a subterranean channel running under the pool and walls and intended to convey the water of the Tyropeon valley into the valley of the Kidron, the natural course of the water having been destroyed by the fortification of the hill.

The next topographical indication given by Nehemiah is "the ascent to the armoury at the angle" or "turning of the wall" (verse 19). This brings us to the south-eastern extremity of præ-exilic Jerusalem, the corner, in fact, of Jeremiah xxxi, 38. The gate mentioned by Jeremiah as existing here is not noticed by Nehemiah, though possibly it may be the fountain-gate of Nehemiah. There were, however, two corner-gates, since the one referred to by Jeremiah occupies a different position from another mentioned in 2 Kings xiv, 13; 2 Chronicles xxvi, 9, and Zechariah xiv, 10. The latter was only 400 cubits south of the gate of Ephraim, which, as we shall see, was between the broad wall and the old gate, and stood to the north of the valley-gate. It was opposite the gate of Benjamin on the east side of Zion, and was also known as "the first gate." From this it is evident that it constituted the first entrance into the City of David on the north-west side, and must therefore have formed part of the fortifications entrusted to the care of Shallum, "the ruler of the half part of Jerusalem." Hence, further, it must have adjoined the tower of the furnaces, so that this must have been one of the three towers erected by Uzziah (2 Chron. xxvi, 9). The other two were at the valley-gate and the angle of the wall, where the foundations of a tower have been discovered.

We are now on the eastern side of the City of David, and Nehemiah's narrative, proceeding in a northward direction, takes us next to the private residence of Eliashib the high priest. Here there was a long stretch of wall, without a gate, the descent into the Kidron valley being too steep to allow of one, until we come to another "corner" or "turning of the wall"

(verse 24). This must be represented by the angle which turns sharply inwards to the west, uncovered by Dr. Guthe a little to the north of the Virgin's Spring. Unfortunately the text of Nehemiah that follows is imperfect, but it would seem from verse 25 that the northern side of the angle faced "the tower which lieth out from the king's high house that was by the court of the prison." We know from Jeremiah xxxii, 2 that the court of the prison was within the precincts of the royal palace. As the palace is stated to be "on high," the tower must have stood below it. Its position is further defined in verse 26, where it is stated that the Nethinim who lived on Ophel repaired the wall "as far as in sight of the water-gate eastward, and the tower which lieth out." The water-gate plainly derived its name from the Virgin's Spring, and a road must have led to the spring from it. From Nehemiah xii, 37 it appears that "the stairs" of the City of David terminated somewhere to the west of the water-gate, which would agree with the position of the steps discovered by Dr. Guthe westward of the Virgin's Spring. The stairs may have led into the broad sheet "before the water-gate" referred to in Nehemiah viii, 1.

"The great tower that lieth out" is again mentioned in verse 27. Here the Tekoites are stated to have "repaired a second portion, from in sight of the great tower that lieth out, and as far as the wall of Ophel." The nature of the ground explains these various statements. The water-gate would have stood on the northern side of the angle already described. Westward of it was another angle formed by the wall which turned off hence to the north-east, its eastern extremity, as has been shown by Warren's excavations, projecting very considerably beyond the first-named angle at "the turning of the wall." Consequently the tower which stood at this extremity would have been opposite the latter angle, though at a good distance from it, the intervening piece of wall forming the boundary of Ophel. Ophel, accordingly, was the rising ground which extended on the east side of Zion from a part of the wall running north of and opposite to the water-gate, as far as another part of the wall a little to the south of the great tower. From this latter spot, as far as the piece of wall which fronted the tower on the west, the fortification was restored by the Tekoites. But this work is described as having been carried on from north to south, instead of from south to north as in all other cases. The reason of this is to be found in the fact that the Tekoites had already repaired a piece of the wall on the western side of Jerusalem, and as this was north of the great tower on the eastern side, when they came to work on this side they began with the northern limit of the work assigned to them instead of the southern.

Ophel, accordingly, is not the whole of the south-eastern hill, which is really the old Zion, but only the rising ground at the north-east end of it. Consequently, the expression of the chronicler (2 Chron. xxxiii, 14) is somewhat loose, and the passage must really mean that Manasseh "built a wall outside the City of David," but westward of the Virgin's Spring, which was continued through the valley of the Kidron, and ran as far as the approach to the fish-gate, and that he also surrounded Ophel with a high wall.

The royal palace, as we know, was on the temple-hill, and adjoined the temple itself ; it would, therefore, have risen above the great tower, which was designed to defend the point where the temple-hill was separated from Ophel. The horse-gate, as we may gather from 2 Kings xi, 16 ; 2 Chronicles xxiii, 15 ; and Jeremiah xxxi, 40, was at the south-eastern extremity of the temple-hill. It was, in fact, the carriage-road into it, and Jeremiah implies that it was regarded as the northern boundary of the City of David, which, in future, the prophet declares, should become as holy as the temple-hill itself. It was to defend this gate that the great tower must have been built, the foundations of which seem to have been discovered by Colonel Warren.

As the horse-gate marked the southern commencement of the upper city, the wall to the north of it was naturally restored by the priests. The next gate was the east gate (verse 29), which is probably to be identified with the gate of Benjamin (Zech. xiv, 10), since the latter was opposite to the corner-gate on the western side, and was named from the fact that it opened into the territory of Benjamin. It no doubt lay below "the upper gate of Benjamin, which was by the house of the Lord" (Jer. xx, 2). At the extreme north-eastern corner of the temple-hill lived more Nethinim and merchants, who doubtless communicated by means of a street with those in the quarter called Maktesh. Here, apparently facing the north, was the gate of Miphkad, or "mustering."

The topography of the walls which I have thus endeavoured to extract from the account of their restoration given by Nehemiah, harmonises entirely with his description of the courses taken by the two choirs on the day when the walls were dedicated (Neh. xii). Here we are told that the first choir entered the city at the dung-gate, and then marching to the right made their way to the fountain-gate "which was over against them," and so "went up by the stairs of the City of David, at the going up of the wall, above the house of David, even unto the water-gate eastward." We may, perhaps, infer from this that the stairs began close to the fountain-gate. The other choir turned to the left, and accordingly passed "from beyond the tower of the furnaces even unto the broad wall : and from above the gate of Ephraim and above the old gate, and above the fish-gate and the tower of Hananeel and the tower of Meah, even unto the sheep-gate ; and they stood still in the prison-gate." The prison-gate is not mentioned elsewhere, and is either the gate of Miphkad, or an otherwise unnoticed gate between the latter and the sheep-gate. It must have stood near the common prison, which was, of course, different from the court of the prison in the palace, which was intended for high-born offenders.

My paper would not be complete without a word or two on the hills surrounding the ancient Jerusalem which are alluded to in the Old Testament. As I have shown, "the mountain that lieth before the valley of the son of Hinnom, and which is in the valley of the giants on the north," must be either Bezetha or Akra, the valley of the giants being the northern border of the ancient Jerusalem. The Mount of Corruption, on which Solomon raised high-places to the deities of the

surrounding nations (2 Kings xxiii, 13), *may* have been the Mount of Olives, since there was an old high-place on the top of it (2 Sam. xv, 32), but it may also have been on the western side of the city. Gareb (Jer. xxxi, 39), which was over against Jerusalem on the side of the Tyropœon, must be the hill on which the Church of the Holy Sepulchre now stands, and perhaps derived its name rather from Gareb the Ithrite, one of David's bodyguard, than from its "scabrous" appearance. Goah will be the district opposite to it on the eastern side of the city, and possibly denoted that part of the valley of the Kidron which lay to the north of the Virgin's Spring. The "king's dale" (2 Sam. xviii, 18; Gen. xiv, 17) ought to have been in the neighbourhood of the royal gardens.

A. H. SAYCE.

I append a rough sketch-map, in order to illustrate my restoration of the topography of *præ-exilic* Jerusalem.

## THE ROUTE OF THE EXODUS.

### 1.

I suppose that the excavations which have been made within the last few weeks in Egypt will have turned the attention of many to a different point for the passage of the Israelites to that which has lately been advocated in the *Quarterly Statement* of the Palestine Exploration Society. I have felt for some time the difficulties connected with any route near to, or north of, Kantara; and I trust that very soon the matter will be much clearer to all who are interested in the truth of Biblical statements. When I went down the Suez Canal, and returned by it, some years ago, all I could say to myself was, that I *had* been over the spot where the Israelites crossed, but *where* that spot was I did not know. I hope that the discussion which has been proceeding will start from a new basis.

I start, therefore, by stating that I believe that the great debouching of the Israelites was not by way of Kantara, and the edge of the Mediterranean, but by way of Wâdy Tumilat, and the neighbourhood of Lake Timsah. The southern end of the land of Goshen ran up to the west of Wâdy Tumilat; the recent excavations at Tel-el-Maskhuta go to prove that Pithom and Raamses of Exodus i, 11, were at the eastern end of Wâdy Tumilat: the Wâdy Tumilat then must have been well known to the Israelites. I believe that when the command was given them to go forth out of Egypt they poured forth by Wâdy Tumilat. Thus doing they would be confronted by Lake Timsah. They would desire to turn northwards along its edge towards Kantara, the usual road to Syria, being also "the way of the land of the Philistines, which was near" (Exod. xiii, 17). But God did not desire that they should escape by that road; therefore, in Exodus xiv, 2, He bids them "turn." These two words, "near" and "turn," seem to give us two keynotes. Does not the first word, "near," point out that the escape was not from the northern end of Goshen by way of Kantara—for that would better be described as "direct," or as "directly

opposite"—but that rather it was by Wâdy Tumilat, which would rightly be called "near" to those who were at Lake Timsah? And does not the word "turn" just express the action of those who, being at Lake Timsah, were endeavouring to escape by its northern edge, but are now bidden to plunge into the difficulties that must meet them at the Red Sea?

In prehistoric times the river Nile must have poured the mud of Ethiopia into the Gulf of Suez by way of Wâdy Tumilat: this gulf would then be open, through the Bitter Lakes, up to Lake Timsah, if not further. In process of time the passage between the Bitter Lakes and Lake Timsah would be silted up; and as the channel of the Nile in Wâdy Tumilat was shallow, that would also be silted up, leaving Lake Timsah as a deep depression of *fresh water*, and so still the "Lake of Crocodiles," as its name imports. From this mud of the Nile, in Wâdy Tumilat, the Israelites made their bricks for Pharaoh. The continuance of Lake Timsah would make the silting up between it and the Bitter Lakes to be but imperfect; hence *quicksands* would be naturally expected—indeed, when M. Lesseps was making his canal, "the Great Bitter Lake" was a morass full of reeds, and marsh plants, and the Arab name for it was "the Valley of Reeds." Thus we are led to expect the existence of a "Pi-hahiroth," i.e., "the place of quicksands."

This, then, is the position of the Israelites: they have "turned" from their most ready means of escape from Egypt—thus doing they come upon "the quicksands of Pi-hahiroth;" south of them appear the Bitter Lakes, then forming the upper end of the Red Sea. They are indeed "entangled."

Their last "encampment" before crossing is "by the sea;" further excavations may give us the true positions of Migdol, and Baal-zephon. Possibly this "encampment" was near the junction of the greater and the lesser Bitter Lakes, and there the crossing was effected. What we require is (1) sufficient water to become "unto them a wall on their right hand and on their left;" (2) not too deep a depression for the Israelites to pass over easily with wives and children: where this spot is likely to be the soundings of the lakes must suggest.

Let me recommend on this subject the most interesting articles by Miss Amelia B. Edwards, on "Is Ramases II the Oppressor of Exodus?" contributed to "Knowledge," in 1882-3; the "Cities of Egypt," by Reginald S. Poole; "La Bible et les Découvertes Modernes," 3rd edition, by the Abbé Vigoureux.

ADAM CLARKE SMITH.

## II.

MAY I be allowed to make two remarks on the papers which have appeared on this subject?

If, after the passage of the Yam Suph, the Israelites found themselves on the shores of the Mediterranean, it is very strange that no indication of that fact is to be found in the narrative.

2. If, after passing the Yam Suph, they crossed the "way of the land of the Philistines" a second time, and were again forbidden to follow it, we should have expected to find some notice of this second prohibition in Exodus xv.

*September 17th, 1883.*

JOHN CYPRIAN RUST.

### III.

WHENEVER the route of the Israelites after their encampment under Horeb is brought into notice, there spring up from many unexpected quarters questions which imperatively demand an answer. At such a time the loss occasioned by the premature deaths of men like Palmer, Holland, and Tyrwhitt Drake is sure to be felt. Just when criticism was beginning to demand greater accuracy and more methodical treatment in matters geographical and historical, their powers of observation were being trained into perfect efficiency. With them must have perished a mass of information of a special character, which had not been so thoroughly analysed and examined as to yield all the valuable metals it contained.

The journeyings of the Israelites from Egypt to Horeb have been well discussed by those who have personally examined the ground; and the survey by the English Ordnance Expedition in 1868-9 has done equally good work in settling many a disputed point, as in placing within easy reach of students a remarkably clear and accurate delineation of the country.

The superiority of the work done by travellers and inquirers of the Palmer school, in such a country as Arabia Petreæ, is seen when one puts by its side the great achievements of even Burckhardt and Robinson, specially in the matter of correct nomenclature. To have secured the help of a linguist like Palmer, versed in all kinds of Arabic and Oriental literature, first in the survey of Sinai, and then in the exploration of the desert between Judæa and the Sinaitic Peninsula, was a piece of good fortune which will be appreciated more and more every day by those anxious to make more clear the Bible narrative.

In that book, what is the information given of the country and people through which the Israelites were to journey, and what is our present knowledge—or perhaps, rather, what is the value of the suggestions as yet made, as to the line which the Israelite march must have taken when they set forward to conquer the Promised Land? The land was surrounded by powerful nations, and these nations, in a state of development, were of necessity brought into contact with each other. Some day we may hope to discover Egyptian archives, which shall give a detailed account of the escape of the Israelite slaves in the time of Minepthah—just as we have now a contemporary illustrated history of the campaigns of the Egyptians, under the king who oppressed the Hebrews, against the Hittite Empire on the Orontes; or there may be a mine of Phœnician antiquities opened to us.

But what do we learn from the Hebrew book which has been so miraculously preserved to us—the Bible?

Abraham's history (Gen. xii–xxv, 10) is more full of geographical information than at first appears, while it introduces us to Hittites, Egyptians, Philistines, &c. Passing over the incidental description of Palestine contained in it, his journeyings take us to the Negeb, and so down to Egypt ; to Bethel and Hebron ; to Kadesh, the wilderness of Shur, Gera, and Beersheba ; to Mesopotamia, Damascus, Syria, &c. The record of the raid of the combined kings from the Euphrates Valley, and the subsequent promise of the land from the river of Egypt (Wâdy el Arish) to the great river, the river Euphrates, makes us acquainted with the various peoples and tribes who then possessed the country which Ishmael's children and Esau's descendants subsequently received as an inheritance. Then, filling in many a little gap, we have the mission of Eliezer, his steward, to Mesopotamia, and also the incident of Hagar's wandering in the wilderness of Beersheba.

Of these records, the most important is that of the expedition of the combined kings. It was like a *Gôm* of modern times, and followed possibly the very route up Wâdy Jerâfeh, which is known now-a-days by the name "Sikket el Gom." The allies seem to have crushed first the Rephaim at Ashteroth Karnain (possibly the "Beit el Kurin" not far from Rabbath Moab) ; the Zuzim, their neighbours in Ham, Ham-mat, or Ainmah ; and the Emim, or Anakim, a kindred people, in the plain of Kureitun (Kiriathaim), to the south-east of Kerah. Next they attacked the Horites, the cave-dwellers of Mount Seir, pursuing them down to the edge of the wilderness, as far as a well-known spot, "the Terebinth tree of Paran." At this point the expedition turned, and, taking the line which the natural formation of the country suggests, swept along below the Negeb, in the direction of Jebel Araif, up to 'Ain Mishpat, which is Kadesh (the fountain of judgment near the "Holy City"). They smote all the country of the Amalekites, and they also smote the Amorites, who were then dwelling on the famous route of invasion which the Moabites and Ammonites used in Jehosaphat's time at Hazazon Tamar ("the Felling of the Palm trees"), "which is Engedi" (Gen. xiv, 1 ; 2 Chron. xx, 2).

Moses's mention in this place of the Amalekites shows that he is describing the country as it was inhabited in his time. For in the time of Chedorlaomer there could have been no Amalekites, as they were descended from *Esau's* grandson, "Amalek ;" while the country (the word used is Sádeh = "plateau") is clearly that tract of land known in Moses's time as "the country of the Amalekites," which was bounded on the one side by the Amorite possessions, and on the other by the Horites of Mount Seir.

The story of Hagar brings us into this same country. Abraham was sojourning at Gerar, between Kadesh and Shur (probably somewhere near Jebel and Wâdy Maghârah, where Professor Palmer stayed on the occasion of his "great ride," at the camp of the Teyahah Sheikh Suleiman) when the ridicule of the son of the Egyptian bondwoman Hagar roused the spite and fury of Sarah. Hagar had once before run away from Sarah

into the wilderness on the way going to Shur, and had taken refuge by the fountain on the caravan route, afterwards called by the Hebrews Beer-lahai-roi, the locality being carefully given as between Kadesh and Bered, and which is supposed to be identified at the watering-place in Wády Muweileh. Her subsequent banishment with Ishmael took place in the wilderness of Beersheba. It is not likely that she went far from the encampment of Abraham, which had been moved further north than Gerar to Beersheba, seeing that the provisions supplied her by Abraham were only what she could carry. But we know that it was in the wilderness of Paran that she and Ishmael afterwards took up their abode, and that Egypt was so accessible that his mother took him a wife from among her own countrywomen. Abraham's Kadesh, and the wilderness of Kadesh, was certainly to the west of the Negeb, and was probably bounded by the rolling plain of Beersheba, and by the wilderness of Shur. I think Kadesh might be considered to be the southern boundary of the country through which Abraham pastured his flocks, as Beth-el might be placed for the northern limit. The city itself was possibly a Hittite shrine, for we know that there was a colony of Hittites settled at Hebron (Gen. xxiii), from whom Abraham bought Machpelah, and from whose daughters Esau, when he was forty years of age, took two wives, Judith and Bashemath. From a city so important the whole district round would take its name ; while the boundary lines between the wastes of Paran and Kadesh would be very carelessly defined.

As to the progress of the nomad Amalekites, who seem to have been the most warlike and aggressive of the descendants of Esau : in Moses's time we find them in the great valleys surrounding *Jebel Serbal*, to one of which we suppose they gave the name Paran (transformed by the Arabs into Teirán), in remembrance of their former home in the hilly country beyond the Tíh range ; and we find them posted with the Canaanites in the mountains which bordered, on the south and south-west, the lower part of the Promised Land—the Negeb. In David's time they invaded the Negeb of Judah and took Ziklag ; while in his concluding prophecy Balaam speaks of them as “the first of the nations” (Num. xxiv, 20).

It does not seem unreasonable to suppose that at the battle of Rephidim (which lasted a whole long day, and about which there was recorded on the commemorative altar, “Jehovah will have war with Amalek from generation to generation”) the Amalekites were so routed as to be forced to retire from all the valleys and pastures south of the Tíh range. Westwards they could not go, because this was the celebrated mining district held by the Egyptians, while on the east were the Midianites. They would therefore be pushed into the northern desert of the Tíh and the mountains of Magráh, Helal, &c. The *terminus ad quod* of the Israelites after Horeb was the Mount of the Amorites. Their way led through the terrible wilderness to Kadesh Barnea, while the wilderness of Paran is mentioned as the scene of their most important encampment, after the celebrated encampment in the plain Er Rahah.

Before I try to make clear a probable route for the Israelites, and

before I make any comparison between the suggestions of Professor Palmer and Mr. Holland, it may be well to take notice of any traces left in buildings or nomenclature by (1) Amorite or (2) Amalekite. The hills to the west of the plateau of Jebel Magráh are very rich in prehistoric remains of every description, as well as in those which belong to Christian and historical times. There are also strange memorials in the names of valleys, headlands, &c.

1. The vestiges of the Amorites may be noted in—

Dheigat el 'Amerín ("ravine of the Amorites"), a valley cutting through the range of hills to the north of Sebaita.

Rás 'Amir ("peak or brow of the Amorite"), a chain of low mountains fifteen miles south-west of El Meshriféh, very conspicuous on the road from the watering-place in Wâdy el Muweileh, and about twelve miles north-west of the fountain in Wâdy Gadís.

Sheikh el 'Amirí, the name attached to the mound of stones on the slope of Wâdy Abyadh, between El Anjeh and Ruhaibeh.

The mountains and wâdies with which such names are connected exhibit terraces laid out for cultivation, carefully constructed banks, and walls to resist the Seils, &c. In the presence of such works of so great antiquity, it may be argued that the people who raised them were either the old possessors of the land, or fancied themselves to have such hold of the land as to justify them in such expenditure of labour.

2. As to the Amalekite vestiges, note the appearance of this powerful people in the Bible. Like the Amorites they were highlanders; indeed, the term Amorite is often merely a descriptive term like Canaanite, Perizzite, or Hivite. Such a country as the Sinaitic Peninsula, the Negeb, and the hills to the west of the Negeb (the country which as yet has been so little explored), seems a natural home for them. At the time of the Exodus they occupied the Teirán Oasis, all the plain which rises from 'Ain Akhdar to Jebel et Tîh, and, as we may suppose, some part of the wild desert beyond, which was held in common possession with other tribes, termed descriptively Amorite, and must have been traversed by them when they left their home in the 'Arabah.

The prehistoric remains scattered over these districts are not all of the same character.

Professor Palmer notices a distinguishing difference between what he calls the Israelite remains at Erweis el Ebeirig, and remains in the same neighbourhood. One longs for some such clear evidence of their personality as was left by the Egyptians at Sarábit el Khádim, or Maghárah. All we have at present comes to this:—In the neighbourhood of Jebel Hadid, a long day's journey south-east of the convent, Palmer and Holland examined the numerous remains which are seen there, and found them to be of two kinds. Suppose the beehive houses (which resemble the *bohan* of the Shetland Islands, and the *talayot* of the Balearic Islands) to have been an Amalekite village, we find others like them at the head of Wâdy el Biyár, where, scattered all over the rough open plain at the foot of

Jebel el Ejmeh, are also traces of dwellings in connection with the more primæval stone circles, or *dowârs*. In Wâdy Hebrân, at Teirán, and on the expanse above Wâdy Hudherah are more remains, as well as at the mouth of Wâdy Nisrín, where it joins Wâdy Teirán. Are these beehive houses Amalekite remains, or the remains of a previous people, or are we so to distinguish the one kind of village and cemetery from the other, as to say that the beehive houses belong to a people (perhaps Midianites) who occupied the land after the Israelite wave passed on northwards? Whichever way our conclusions incline, the land is found to have been capable of habitation, and to have presented some inducements to settlers.

I propose now to consider Mr. Holland's conclusions from his visit to the wilderness of Et Tîh in 1878. My own route in 1881-2 corresponded to some extent with his. At Erweis el Ebeirig, near the debouchure of Wâdy Sa'al, Mr. Holland turned north-east. Not satisfied with Palmer's identifications of Erweis el Ebeirig with Kibroth Hattaavah, and of 'Ain Hudherah with Hazeroth, he imagined for the Israelites a route which would have no inclination towards the sea, and proceeded to examine the pass Nagb Murrah, which leads over the lower range of Jebel et Tîh. He says that it is a difficult pass, and unsuitable for the passage of a large multitude. He also examined a pass leading up by Jebel Dhakal, and the pass Nagb el Mûrâd ("the Pass of the Watering-place"), which was first brought to notice by Drake and Palmer. This pass is not arduous, though winding and impracticable for wagons. There are some much frequented wells at El Biyár ("the wells"), about an hour from the base of Jebel Ejmeh, and there are wells in Wâdy Edeid, into which Wâdy el Biyár runs. In fact, in all this district underneath the southern and south-eastern ranges of the Tîh there is plenty of pasture and a fair amount of water.

Mr. Holland seems by chance to have come upon the Derb es Soûrah while tracing down Wâdy el Atiyeh to its junction with Wâdy Sowâin. My Arabs brought me from Wâdy el'Ain, after I had been down from Hudherah to the Gulf of Akabah, to Wâdy Soûrah. The cave with the pool of delicious water mentioned by Mr. Holland is exceedingly picturesque, and one almost expects to see at the bend of the valley a thriving Swiss village. The road which ascends from this point into the Tîh mountains is by no means steep, and might be adapted for heavy traffic. Looking back one has a splendid view over the peninsula, and realises better the incline of the whole district, which is so well described in the expression "going down to Egypt." The route from Derb es Soûrah leads north-east to Jebel el Herte, passing by a large Arab cemetery. Some four hours further on a road falls into it from Akabah, and my cameleer pointed out a stone with figures and signs cut on it which seemed like tribe marks, though they may have been ancient. One of the wâdies I traversed in this day's journey was called Wâdy el Butmeh ("the valley of the Terebinth"), and suggested to me the "Eil Paran" of Genesis xiv, 6 (translated in our version's margin "the plain of Paran," and written "Eil Paran.") From Jebel el Herte Mr. Holland journeyed some twenty-five miles north-eastward to Wâdy Meleg, which flows towards the 'Arabah. A raid of

the Haiwátt Arabs into the Maâzi country, to the north-east of 'Akabah, deterred him from proceeding much further than the watering-place in this wâdy. My own route did not bend so much to the east, and brought me in about two days' journey to the wells of Themed, a little south of the Hajj route, and almost midway between Nakhl and 'Akabah.

A few weeks later on Mr. Holland made an expedition, under the escort of eight Haiwát Arabs, from Wâdy el'Ain, a wâdy coming down from the west side of the plateau of Jebel Magráh (the Negeb) to 'Ain Gadís. He tried unsuccessfully to explore the southern face of the plateau of Jebel Magráh towards Jebel 'Araif and Wâdy Garaiyeh, but he opened out an important country between Jebel Helál and Ismailia, which would be the line of traffic from the East to Egypt when Petra was a commercial centre, or when the Negeb was a thickly inhabited and well-cultivated country, as we feel sure, from the remains so visible now on the surface of the ground, it must once have been. His road brought him to the wells "Emshâsh," and near to others called El Jidy, and through the midst of the Jebel Maghárah range. Between Jebel Yeleg and Jebel Maghárah runs to the north-east Wâdy Dow, the two mountain ranges stretching away to the westward. Jebel Maghárah, on one of whose slopes are some old round tombs, probably takes its name "Cave" from an arch (the supporting masonry still stands) which covered over the water-hole. Here are many Nawamis, and the remains of a square building, 30 feet by 20 feet, of roughly-hewn stones without mortar, besides twelve large watering troughs of rude masonry.

The whole surrounding country must be full of ancient remains. Mr. Holland found a number of flint-flakes, and some beautifully made arrow-heads, and says that wherever there were no sand-drifts the ancient road could be traced by these flint-flakes.

Professor Palmer's conclusions are given in chapter xi, volume ii, of "The Desert of the Exodus." The points he makes are :—

1. On leaving Sinai the children of Israel were conducted to some place whence they might make an attack on the idolatrous nations who barred their way to the Promised Land. Numbers x, 12 gives the general destination, the chapters following the detailed account of the journey.

2. The first permanent halting-place was Kibroth Hattaavah ("the graves of lust"). At Erweis el Ebeirig are seen the traces of the actual encampment, and the traveller may hear from his Arabs the tradition which gives life and meaning to those strange remains.

Hazeroth ("Enclosures") and Hudherah correspond in Semitic orthography, and in geographical position.

3. After Hazeroth we are told in Numbers xii, 16 that the people "pitched in the wilderness of Paran." In chapter xxxiii the stages of the journey are given. One of these is Ezion Gaber, which was at the head of the Elanitic Gulf. . . . "It is therefore certain that they took the route by 'Akabah, and did not enter the Tîh by any of the passes in the southern edge of the plateau." (Here I cannot follow Palmer. I think it was as easy for the Israelites to get to Ezion Gaber by Derb es Soûrah and the

neighbouring passes, and then by Jebel el Hertz, and a wâdy like Wâdy Meleg, as to take the shore route, with its steep cliffs, promontories, &c. At page 514 Palmer tells us that Ezion = the Arabic "Ghadyán" = "Diana" in Latin, which is one of the stations in the Pentinger Tables on the route from 'Akabah to Jerusalem, and distant from 'Akabah fourteen and one-third English miles. But his measurement from Contellet Garaiyeh, which he proposed to identify with the Gypsaria of the Pentinger Tables, seems to be erroneous, since by the Tables the distance between Haila or 'Akabah and Gypsaria is forty-three miles, whereas on the map, in a straight line, it is about fifty-six miles. The only way to reconcile such a variation seems to be either to suppose the distances through the desert to be inaccurate on the Tables, or to put Elath or Haila some miles further north than the present fort of 'Akabah, and the Roman station Diana in Wâdy Ghadyán, instead of at the very spot where the port of Ezion may have stood; or, giving up the identification of Contellet Garaiyeh with Gypsaria, to place that station on the southern bank of Wâdy Garaiyeh.)

4. The wilderness of Zin must be the south-east corner of the desert of Et Tîh, between 'Akabah and the head of Wâdy Garaiyeh. The name "wilderness of Kadesh," though properly applicable to the plain in front of the cliff in which 'Ain Gadís rises, might have been extended in its application to the whole district. The wilderness of Paran comprised the whole Bádïet et Tîh, and Mount Paran is the lower portion of the mountain plateau in the north-east, known now as Jebel Magráh, below which, on the western side, is 'Ain Gadís, and Kadesh itself, situated on the plain by which most easily the Amorite mountains would be reached.

5. The Israelites, being encamped in the plain at the foot of the cliff's in which 'Ain Gadís takes its rise, were to march into Palestine by the easy route which skirts the western edge of the mountains. The spies were sent out from Kadesh, making a detour by way of the mountains of the Negeb, and striking into the heart of the plateau at Wâdy Ghâmr; they were to search the land, and to return by the western route. They brought their grapes, pomegranates, and figs from some of the vineyards and gardens which one comes across in the country immediately above Wâdy Muweilih, and not from the valley of Hebron, some sixty miles distant.

6. In the mountain north-east of Wâdy Hanein, a locality where we find the Amorite name preserved in Dheigat el 'Amerín, Rás 'Amir, and Sheikh el 'Amirí, &c., the forces of the Amorites were doubtless concentrated, guarding the road to the Promised Land, *vid* Rehoboth, as well as that which led through the centre of the mountains of the Negeb towards 'Ara'rah, the Aroer of Judah (a city to which David, after his victory over the Amalekites (1 Sam. xxx, 28), sent a share of the spoil, and towards the rich pasture country of the Canaanite, the King of Arád, marked now by Tell 'Arád.

7. In Deuteronomy i, 2, he finds a clear indication of the direction of the route of the Israelites. Moses is about to give the Israelites some account of the wanderings of "the forty years' punishment." He clears the ground at starting by saying, "There are eleven days' journey from

Horeb, by way of Mount Seir, to Kadesh Barnea." Though we have been so long on the way, keep before your mind that to the ordinary traveller the route was plain and direct. To reach Mount Seir we made twenty separate encampments before Ezion Gaber was reached. Water and pasturage and open camping-grounds had to be taken into consideration, as I foresaw when I pressed Hobab the Midianite, naturally well acquainted with valleys, &c., in the eastern portion of the peninsula, to act as our guide. But ours was an exceptional case.

8. The fertile portion of the Negeb is bounded by Wâdy Marreh, Wâdy Maderah, Wâdy el Abyadh, &c. The mountains to the south of these wâdies and the southern plateau of Jebel Magrâh, through which the Israelites passed unopposed, was a sort of neutral ground between the Edomites on the east, and their kinsmen the Amalekites and other allied tribes on the west, who are spoken of in 1 Samuel xxvii, 8 as being "of old the inhabitants of the land as thou goest to Shur, even unto the land of Egypt." This land had previously been inhabited by the Avim (Deut. ii, 23), "which dwelt in Hazerim ('pastoral enclosures,' as at Hudherah, the *dowars* and stone circles so common in the district) even unto Azzah ('Gaza')." Edom proper, Mount Seir of Deuteronomy, is a narrow slip of country, for the most part mountainous, but very fertile, extending northward from the head of the Elanitic Gulf as far as Wâdy Kereh, the southern boundary of Moab. The eastern hills and terraces of the plateau of Et Tîl form its western boundary, and the Hajj route from Damascus to Mecca its eastern boundary.

9. There is no possibility of reconciling the passes in Deuteronomy and Numbers, either with each other or with the actual topography of the country, unless we place the wilderness of Kadesh Barnea in the desert south of the pass into the hill country round Meshrifeh and Sebaita—in the cliffs above which desert is 'Ain Gadîs. Moses says (Deut. i, 7) that the mount of the Amorites is the goal of their journey from Horeb, and in verses 19 and 20 he says: "We came, having passed through the great and terrible wilderness" (words probably inapplicable to the lower Arabah when Ezion at the mouth of Wâdy Ghadyán was a port, and the terminus of a commercial road leading both to Egypt and to the Philistine country), "to Kadesh Barnea. And I said unto you, Ye are come unto the mountain of the Amorites, which the Lord our God doth give unto us." Kadesh, in Numbers xx, 1, is spoken of as being in the wilderness of Zin—just as Meribah Kadesh, in Deuteronomy xxxii, 51, the scene of the great transgression of Moses and Aaron, is also described as being in the wilderness of Zin. It is from that point—Kadesh of the wilderness of Paran, or of Zin (Num. xii, 16; xiii, 21, 26)—that the Israelites went up presumptuously to the hill-tops, and were smitten by the Amalekites and Canaanites.

10. Between the defeat at Hormah and the re-assembling of the people at Kadesh, the well-known sanctuary of another nation, is a gap of thirty-eight years, in which only a few incidents are recorded. They were the years of the penal wanderings of God's people, sunk now to the level of a

mere nomad tribe. But from Kadesh, in the fortieth year, they set out under God's direction, a new people, into the wilderness of the Red Sea (the route which led down to Ezion Gebir and Elath), in order to compass the territory of the Edomites, through which they had been refused passage, and to pass up by the eastern desert towards Moab and the Jordan fords. That the rallying point was Kadesh goes some way to prove that they could not have penetrated into the eastern desert before, for in that case the natural rendezvous for a nation wanting to reach the ford of Jordan would have been to the east of Edom, while had Kadesh been north of the watershed of the Arabah, there would have been a necessity for asking passage through a portion of the territory of Edom to reach it, both now and on their first visit.

11. The attack by the Canaanite, the King of Arád, is to be taken as an episode in the march of the Israelites, while they were encamped in the Arabah, near Mount Hor, and were waiting for the return of the messengers sent from Kadesh to the King of Edom,—just as the expedition against Midian (Num. xxxi, 1, 12) must have been an episode of their sojourn in the plains of Moab.

12. In Numbers xxi we have an account of the journey after the Edomite refusal was known. Its direction is first southwards to the head of the gulf, and then by Wâdy Ithm on to the road to Moab which runs between Edom and the limestone plateau of the Great Eastern desert.

The difficulty about the itinerary of Numbers xxxiii, if Palmer's view be adopted, that it gives the details of the various stages from Horeb to Kadesh, seems to me to consist in the minute account of the stations between Horeb and Ezion Gaber, and the omission of any between Ezion and Kadesh. The only explanations which in any way satisfy one are, that the Israelites took an unusual course to get to Ezion, or that they marched in several detachments by various routes, and so the several camping-grounds of the detachments are mentioned.

Ezion Gaber, at the head of the gulf, was geographically the most important point in their journey. Thence to Kadesh was a frequented road used by the merchant caravans. Palmer seems here to have got confused. He says that he has no doubt whatever as to the general direction of the Israelites' journey : he reminds us that the wind in Numbers xi, 31 brought the quails from the sea, as though the people were moving towards the sea rather than directly northwards to the rolling plain beyond 'Ain Akhdhar ; and he believed that all, or at least a portion, of the unidentified names may be recovered in the district north-east of 'Ain Hudherah and south-west of the 'Azázimeh mountains. He then mentions Rissah as probably identical with the "Rasa" of the Pentinger Tables, sixteen Roman miles from "Diana" (Ezion) ; Haradah with Jebel 'Arádeh, at whose base runs the great Wâdy el 'Ain of the Hudherah district ; Tahath with Wâdy El'thí, the connecting wâdy between Wâdies Hudherah and El 'Ain ; Heshmonah with Heshmon, one of the frontier cities of Judah in the Negeb, towards the coast of Edom. These identifications quite throw out of gear the continuous itinerary of Numbers xxxiii, 16-36.

It is noticeable that many of these names of the stations are taken (as is the case with the Arabic names in use to-day) from features in the landscape, *e.g.*, from the strange formation of a cliff, from a conspicuous tree, from the presence of water, &c. And this would account, then as now, for the confusing recurrence of the same name in distinct, though not far off, districts. But such a record of certain journeyings as that given in Deuteronomy x, 6, 7, precludes this fact from being urged to support the theory that we are reading of two different periods of the great journey of the Israelites.

There is another view of the itinerary of Numbers xxxiii. It is set forth by Bishop Wordsworth in his Commentary. The itinerary, according to this view, is to be divided into four periods:—

First period (verses 5 to 15)—from Rameses to Horeb.

Second period (verses 16 and 17)—from Horeb to Hazaroth, and  
(supplying verse 16, Numbers xii) so to Kadesh Barnea.

Third period (verses 18 to 36)—from Kadesh Barnea the first time, to  
Kadesh Barnea the second time, a period described very briefly  
in Deuteronomy i, 46.

Fourth period (verses 37 to 49)—from Kadesh to the plains of Moab.

With this careful division, however, we get into confusion again with Deuteronomy x, 6, 7. *There* a journey is described with much precision. It starts from the watering-places of the great Beni-Jaakan tribe to Mosera (the well-known place—the historian says—where Aaron died and was mourned for thirty days), then to Gudgodah (Hor-hagidgad), and then to the district of Jotbath, which, after the wilderness, seemed a land of rivers of water.

In Numbers we have Mosera first, then Beni-Jaakan, then Gudgodah, then Jotbath. Of course there may be an easy way out of the difficulty, but it is hardly fair to say that in the one passage the first journey is described with its continuous and regularly appointed march, and in the other, with all the appearance (except in proper topographical sequence) of a regular succession of the proper stages of a journey, the capricious movements of a wandering people through a long stretch of years.

Such stations as Rithmah, Rimmon-Parez, Zibnah, Makheloth, Mitheah, Ebronah, might be anywhere in a district whose valleys are named merely from the existence of water, or of pasture, or of a single tree. Still, that four of the stations of this third period should be mentioned together in another record, which is describing the journeyings of another period, rather goes to negative the view that in this third period some of the stations of the penal wanderings are being given.

The prehistoric remains in the peninsula, in the Badiet et Tih, in the Negeb, and in Jebel Magráh, furnish a proof that the whole country must have presented a very different aspect to the Israelites from what it now presents. The discovery, too, of such roads from the district under the Et Tih range to the plateau and plains above, as Nagb el Mírád, Derb es Súrah, and one still more to the north-east, shows that the access to the

Promised Land from the peninsula may have been easier than was supposed by Biblical students of a past generation.

Kadesh Barnea was the destination of the Israelites, and, as Palmer points out, drawing his inference from the strangely placed passage in Deuteronomy i, 2, "by the Mount Seir route." This probably meant by the 'Arabah. But if the Elanitic Gulf had its head at Ezion, near the mouth of Wâdy Ghadyán, it would be more natural for a large caravan bound for Ezion to make its journey inland than to take the seashore course, by striking it at the debouchure of Wâdy el 'Ain or Wâdy Wettîr. I am myself convinced that such a route from Hudherah (even if it were shown that Wâdy Elt'hí, between Wâdies Hudherah and El 'Ain, is not open enough for the passage of a large multitude) is quite practicable. It would make its first station at the lower water of Wâdy el 'Ain, and its next at the base of Jebel 'Aradeh, where is a fine open plain, rich in prehistoric remains. It would follow up the easy wâdies which pass the spring water at Soûrah, and lie near the upper waters of El 'Ain to the road—"Derb es Soûrah"—and so to the uplands of the eastern portion of the Tîh range. Though I was bound for the well Themed (my Arabs pronounced the word "Summed") on the Hajj route from Nakhl to Arabah, I could, from several points of view, survey the country stretching towards the 'Arabah. I imagine that no special difficulties would present themselves before reaching the western slopes of that great valley, and the point where I suppose Ezion to have been situated. A "terrible wilderness" is this portion of the country, but there are five known wells to the south of the Hajj route, and many watering-places, with much water after rain. From the numerous groups of Nawámís, and from the cairns or beacons one comes across, it is reasonable to suppose that this strange tract once possessed more life than now, and was more frequently traversed.

The route I followed from the well at Themed avoided Nakhl altogether; and I think it pursued the line which the Roman road, whose stations are given on the Pentinger Tables, took from Elusa to Diana. Except in the want of water between Themed and Muweileh (twenty-eight hours), the route involves no excessive fatigue or hardship. Jebel Muweileh and the 'Ain, which is supposed to be Hagar's well, "between Kadesh and Bered," lie more to the west than 'Ain Gadís, but so near (about twelve miles) that the wâdy, which is wide and open, might be included in the wilderness of Kadesh.

In conclusion, I would observe that I don't see why Palmer lays such stress on "Hudherah" being "Hazeroth" of Numbers xi, 35. Hazeroth (Hazerim = "pastoral enclosures") was a very general term, and would apply to many of the prehistoric remains below the Tîh range. It may be a mere chance which has preserved the name in the word "Hudherah." On the other hand "Hudherah" is a beautiful oasis, and presents every attraction for the encampments of a multitude of people.

Palmer says, at the commencement of the story of his travels: "The scenes of the Exodus took place undoubtedly in that desert region—Arabia

Petraea. This includes, besides the Sinaitic Peninsula, the Bádiel et Tíh (literally signifying 'the desert of the wanderings'), and some portion of Idumaea and Moab.

"The desert of Et Tíh is bounded on the north by the Mediterranean Sea and the mountains of Judah; on the west by the Isthmus of Suez; and on the east by the 'Arabah, that large valley or depression which runs between the Gulf of 'Akabah and the Dead Sea."

Of Jebel el Magráh he says : "The mountain plateau in the north-east of the Tíh is full of interest. . . . It is about seventy miles in length, and from forty to fifty miles broad, commencing at Jebel 'Araif, and extending northward by a series of steps or terraces to within a short distance of Beersheba. . . . It projects into the Tíh, much in the same way as the Tíh projects into Sinai, and, like it, also terminates in steep escarpments towards the south, falling away to a lower level on the south-eastern side. On the west it is chiefly drained by two main valleys, Wády Garaiyeh and Wády el Abyadh, which ultimately combine their streams, and, flowing into Wády el 'Arísh, are carried on to the Mediterranean. On the east Wády Ghámr and Wády Marreh receive the greater part of the water-supply, and bear it down to the 'Arabah into the Dead Sea. This mountain plateau is the Negeb, or "south country," of the Bible. The watershed of the 'Arabah on its eastern limit is some twenty-five or thirty miles more to the south than the southern boundary of the Magráh plateau.

C. PICKERING CLARKE.

THORNHAM, EYE,  
August 28th, 1883.

### LARGE MILLSTONE ON THE SHITTIM PLAIN.

SPEAKING of certain peculiar stones in the part of Moab examined by Captain Conder he says : "The stone is yet more remarkable : it lies in the Ghor south of Kefrein, beside a thorn tree ; it is  $10\frac{1}{2}$  feet in diameter, and 3 feet 6 inches thick, being far too large and heavy ever to have been used as a millstone. It is pierced by a cylindrical hole in the middle, 2 feet in diameter. The Arabs call it *Mensef Abu Zeid* ("the dish of Abu Zeid"), and relate that this mythical hero here sacrificed a whole camel which he gave as a feast to the local Arabs when he was about to leave the Ghor" (*Quarterly Statement*, April 1882, p. 74).

This is the same stone which I examined early in 1876, and of which I gave an account in my report to the American Society, which was published in the winter of 1876-7. In my volume "East of the Jordan," p. 231, after having spoken of the dolmens in this vicinity, which Conder has since described, I say, "about half-way between these two places (*i.e.*, Tell Ektanu and Tell el Hammam) I found an immense circular stone lying

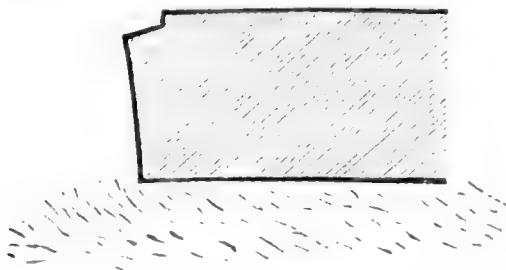
on the top of the ground ; it is 11 feet 4 inches in diameter and 44 inches thick."

Now a difference of 10 inches in the diameter of a stone of this size is considerable, and a similar remark may be made of the difference in our measurements of its thickness, although that is not so remarkable. Hence I ask myself "can I have been mistaken in my measurements?"

In April of the present year I spent nearly ten days east of the Jordan, and took occasion to revisit the stone in question, and to make accurate measurements of it. I found the diameter to be exactly as I had given it, 11 feet 4 inches. The thickness, however, cannot be so accurately determined, owing to the fact that the upper surface of the stone is uneven, and portions of the edge have been badly chipped ; besides, one side of the stone is a little thicker than the other, varying from 3 feet 4 inches plump to 3 feet 8 inches scant.

Two interesting facts connected with the stone remain to be mentioned. I noticed that it appeared to flare a little from the bottom towards the top, and upon measuring I found the circumference at the bottom to be 34 feet 7 inches, and at the top to be 35 feet 8 inches, making a difference of 13 inches.

The other fact is that around the outer edge of the upper surface there was a border about 5 inches in width, as seen in the accompanying cut.



Around this border a curb of wood was fastened tightly to the stone. This curb would be 1 or 2 feet high, according as necessity required, and thus the entire surface of the stone would be left free for the crushing of whatever the mill was designed for. Millstones arranged as now described with a border and a curb of wood are still in use in the country at the present day. All the indications seem to me to point to the inevitable conclusion that this particular stone was designed for a millstone and for nothing else.

On the same page (p. 74), Captain Conder describes certain "disk-stones," one of which is 6 feet in diameter and the other is 9 feet 6 inches in diameter, which "are much like millstones in appearance." "Their great size," he says, "and the absence of any remains of a foundation or other parts of a mill in their vicinity, is, however, a reason for regarding them as having some other purpose." These stones have "no hole in the centre."

Millstones that are brought to market at the present day are not always perforated by a hole in the centre, and as to the size of these stones

being an objection to their having been designed for millstones, it is sufficient to say that stones larger than the largest of these two are still in use in the country as millstones.

An American who visited this region some years since appears to have seen and described these identical stones. He asserts that on account of their size, and because they have no hole in the centre, they could never have been designed for millstones, and his antiquarian zeal leads him to see in them mysterious "solar disks," connected with the worship of Baal. But this same gentleman is famous in Palestine for having "discovered" a lot of "rude stone monuments of a high antiquity," "connected with early Phœnician worship." He even points out what part was "employed for the fire of wood or coals" and "where the victim was laid across." It turned out, however, that these were nothing but old oil presses, which even his elaborate description could not change into ancient altars.

SELAH MERRILL.

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### THE NEWLY-DISCOVERED CHURCH.

THE work of excavation at the newly-discovered church north of the Damascus-Gate, has been carried so far since Captain Conder and Lieutenant Mantell made their brief reports in the *Quarterly Statement* for April, 1882, pp. 116–120, that it needs to be described again. The ruin has proved to be one of great extent, and of special interest.

The way in which it was brought to light is worth recording. In an uneven field, which rose considerably above the land about it, parts of which appearing, indeed, like little hillocks, the owner of the soil tried to maintain a vegetable garden, but the ground was so dry that neither grain nor vegetables would flourish, and even irrigation did little or no good; besides, here and there large holes appeared in the ground which could not be accounted for. At last the owner determined to dig and see what there was below the surface of his field, and to his surprise he very soon came upon fine walls and a pavement. The excavations being followed up have laid bare a church with some of the surrounding buildings.

The amount of *débris* which had accumulated above the floor of these buildings was 10 to 20 feet in depth. To remove this mass of earth has required much time and labour, and the work is not yet completed.

The piece of ground in question has about 60 yards frontage on the main road (see the plan of this section in *Quarterly Statement*, April 1882, p. 119), and extends, so far as the excavations go, about the same distance back from the road, that is, to the east.

The church itself is situated on the south side of this plot, and is very near the street. The ground in front of the church is paved with fine slabs of stone, on one of which is the inscription given by Lieutenant Mantell on page 120. The steps by which the church was entered were 5 feet wide, but the doorway itself was somewhat wider. From the

entrance to the altar-step, or platform, the distance is 55 feet, and from that point to the back of the apse 15 feet 6 inches ; the width of the apse is 16 feet 6 inches. The width of the church is 24 feet 6 inches. 9 feet in front of the altar-step a wall has been thrown across the church, in a manner similar to that in the Church of the Nativity at Bethlehem. This wall, also those of the church, of which several courses remain, and the interior of the apse, show that the building was originally painted, and some of the figures and designs can still be traced.

At the south-east corner of the church, leading from the apse, there is a narrow but well-built passage-way to the buildings in the rear. The character of these buildings is not very evident ; certainly they did not stand on a line with the church, but at an angle of  $25^{\circ}$  with that line. Between the church and what appears now to have been the main building in the rear, there was a passage not over 3 feet wide ; this passage and the one at the south end of the apse had been reached when Lieutenant Mantell made his report. The main building in the rear of the church is 47 feet 6 inches long, but to this must be added 20 feet more of a special room which seems to have belonged to it, and which had a beautiful mosaic pavement.

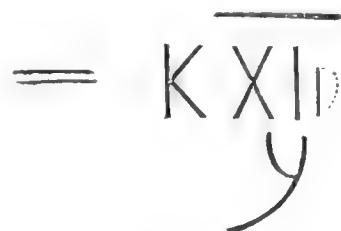
Thus the extreme length from the entrance of the church to the (present) east side of this mosaic floor is 140 feet.

On the west side of this mosaic floor, where it joins the wall of the main building, there is a threshold of a single stone 9 feet 6 inches long, with a step 6 feet 9 inches in the clear. This is considerably wider, it will be seen, than the steps, and even the entrance of the church. Several patches of mosaic pavement have been found, but in one place two or three square yards have been preserved, enough to show that the work was extremely beautiful. The coloured tracings resemble those in the church on the Mount of Olives, and on one side are the large Greek letters ΧΩΕΟΥ.

North of this mosaic floor, and of the main building which joins it, and running alongside of both, there is a watercourse or channel cut in the solid rock, which has been levelled to accommodate the buildings above. This can be traced in an east and west line for a distance of 37 feet ; it is 2 feet 3 inches deep, 20 inches wide at the top, and 12 at the bottom. From about the middle of the mosaic floor this channel turns a right angle and runs 20 feet or more (so far as I could trace it) to the north ; it is possible that it led *from* the north, and at the point indicated turned a right angle and ran to the west. Piles of stones and *débris* prevent us at present from deciding as to the length of the channel or where it came from.

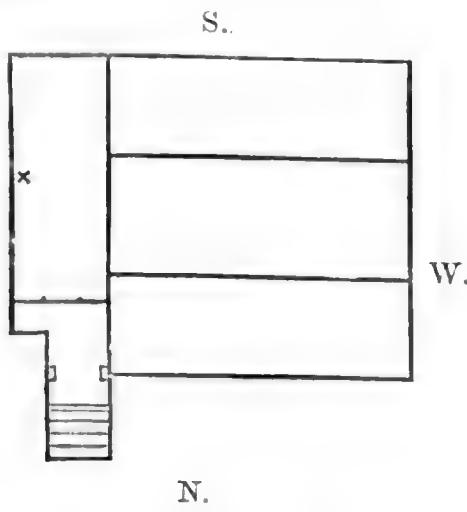
In the bank of *débris*, which rises on the east side of the mosaic floor to a height of 20 feet, there is, about 6 feet above the floor, a watercourse formed of cement, running north and south at right angles to the line of the church and the other buildings, which must have belonged to a much later period. In fact—and this is an interesting circumstance—the mosaic pavement appears to extend under and beyond this canal and the mass of *débris* which is yet to be removed.

In the north-west corner of the room where the mosaic floor is found, very near the angle (already mentioned) of the rock-cut channel, there is a tomb about 6 feet below the surface or level of the floor. The tomb is 10 feet long and 9 feet wide, and is entered by a doorway 26 inches wide, which is well built, and in the sides of which are grooves for a door to slide up and down. On the wall of the tomb at the east end there is a raised Greek cross, 22 inches long and 13 inches wide. At the left of the horizontal bar of the cross are the following letters or characters :—



Each letter is 5 inches in length. They are deeply cut, and the bar above them extends from the cross to the small character at the end. There appears to be something where I have made the dotted line, but it is not so deeply cut as the rest, and being very near the end of the cross-bar of the cross it may never have been designed as a part of a letter. The short verticle bar of the last character is cut as deep as the rest.

The following is the ground plan of the tomb :—



\* Cross at this point.

One cannot stand erect in its highest part, but it is to be considered that the loculi are two-thirds full of *débris*, composed chiefly of decayed bones and bits of glass. Those in charge of the excavations have not, up to the present time, allowed the tombs to be cleared out. The loculi are 2 feet in depth.

What Captain Conder (p. 116) speaks of as "vaults north of the church," turn out to be the tops of houses. They are four in number, each 75 feet long by 28 feet wide, and faced the street. They were divided (one or two of them at least) into apartments by means of arches. The

lower courses of the walls, to the height of several feet, are of squared stones, while the upper portions and the roofs are of rubble work, which was covered with a heavy coating of plaster. The threshold of one has been exposed, which is 6 feet in the clear, and the sides of the doorway show excellent work.

Among the ruins there are two sections of marble columns, each 33 inches in diameter; but where they belonged in the original structure, or whether they belonged to it at all, I cannot say.

Three large cisterns have been found, two of which were nearly full of water; the mouths of these, which were closed, were many feet below the surface of the ground before the excavations began, hence no one knows how old the water in them may be.

Some of the slabs with which the church was paved were 6 feet long by  $2\frac{1}{2}$  wide.

In the church two pieces of cornice were found, each 8 feet in length. One is entire and quite plain, while the other is broken in the middle. It is upon this that the figures of Christ and His twelve Apostles were painted. They can still be traced, although exposure has nearly obliterated the colours.

Pottery and a considerable quantity of broken glass have been found, and some small articles in marble of no great value. The top of a certain block of marble has been formed into a basin, and a hole drilled the entire length of the block for the water to run off.

South of the mosaic floor and of the east end of the main building there is a large underground chamber with seven openings (each the size of a man's body) to the surface. The chamber is 12 feet wide and nearly 20 feet long, but the depth is not yet ascertained, owing to the accumulation of *débris* on the bottom. On the west and north sides a wall of solid rock appears to a depth of 6 feet, showing that the chamber was excavated in part at least in the solid rock. The use of this chamber does not appear evident, unless it may have been a store-room. The place within the city shown as "Peter's Prison" consists of a similar chamber (not dug in the solid rock however), with similar openings in the ceiling, or roof.

I have already hinted that the ruins extend under ground some distance to the east of the mosaic floor, and efforts are being made to purchase the land in that direction, in order to allow of the excavations being extended there. It is almost equally certain that the buildings extended to the south and south-east of the present plot of ground. But the owners of the land are jealous and everybody is superstitious; consequently excavations must be abandoned, or move with aggravating slowness.

With regard to the inscription on the slab in the pavement in front of the church, given by Lieutenant Mantell, page 120, I have little new to add to what he has said. I have submitted copies to different scholars, but do not know that it has yet been satisfactorily read. In the copy given by Mantell, the first two letters in the fourth line need correction. Of the first, only about one-third of the upper right-hand portion of the letter is

perfect on the stone ; the second shows an O quite perfectly. As the left-hand edge of this stone is true, and perfect with the exception of some chippings at the lower corner, this slab can easily have joined another at the left, and thus have formed the right-hand end of a long inscription.

#### NOTE.

Since writing the above I have visited the church again, as I have done many times during the year past. The west wall of what I have called the "main building," towards the apse of the church, has been removed and the floor cleared, exposing a fine pavement. This pavement, the threshold before mentioned, and the mosaic floor all belong to one period, and to a structure very much older than the date of the "main building." It puzzled me because the threshold west of the mosaic floor was not square with the east wall of the "main buildings," but the reason is now clear. Captain Conder (p. 116) says of this church, with such of the ruins about it as were exposed when he was here, that "the whole is evidently of the Crusading period." As regards the church itself this to me is not so clear, and the mosaic floor especially I would carry back many centuries previous to that era.

At the south side of the floor of the "main building" a new mouth to the largest cistern has been discovered ; over the mouth there is a thick stone 5 feet in diameter. This was eight-sided, and was built against the wall, so that five sides are exposed. The stone was cut in such a way as leave on two of its sides small brackets shaped like the two halves of the utensil called a "tunnel."

It may be of interest to state that this piece of land was offered for sale a few years since, and for a long time went a-begging for a purchaser ; at last it was sold for 40 napoleons. During the present year it has passed into the hands of the French for 2,000 napoleons.

SELAH MERRILL.

#### THE BITUMEN OF JUDEA.

An investigation of the nature of this natural product of Judea and the Dead Sea has been made by M. B. Delachanal, who has communicated his results to the French Academy of Sciences. It is employed in Palestine as an insecticide on the vines, and hence the recent attention it has attracted in France, where *savants* are still engrossed with the problem of fighting the phylloxera. Some kilogrammes of the bitumen were procured from the French Consul at Jerusalem by M. de Lesseps, and on this M. Delachanal has operated. He finds the presence of a considerable quantity of sulphur in its composition. It is a deep brown colour, nearly black, and of a friable nature. It contains 27 per cent. of oil, which is nearly colourless, and of the nature of petroleum. A solid paraffin can also be extracted from it. The rest of these experiments is that the bitumen of Judea, if it

prove efficacious as an insecticide, may also be turned to good account by the manufacturing chemist in the production of sulphur and illuminating oils. The presence of sulphur in its composition appears to assign to it a mineral, not organic origin.

## THE HOLY ANOINTING OIL.

*To the Editor of the Palestine Exploration Quarterly Statement.*

SIR,—Captain Conder's note on this subject (1883, p. 102) emboldens me to conclude that my doubts were well founded ; otherwise he would certainly have pointed out some further proof of their authenticity.

I should like to say, however, that in my copy of the "Handbook to the Bible" (that of 1879), at page 105, there is really nothing to show that the statement I quoted was not that of the authors themselves, and even in the second paragraph, at the beginning of which the "Comment of Maimonides" is mentioned, it is the "mode of preparation" which he is said to "detail," and there is nothing to show precisely that Maimonides is responsible for the statement that "the Holy Oil failed in the reign of King Josiah."

Now that these assertions are attributed to that author, I think I may fairly expect Captain Conder to allow that, however "careful" an "authority" Maimonides may be, he should not be believed in opposition to the seemingly precise statement of the Hebrew Scriptures in the passages which I quoted (2 Kings xxiii, 30, and 1 Chronicles ix, 30).

Yours obediently,

June 25th, 1883.

H. B. S. W.

## PILLAR, OR GARRISON ?

*To the Editor of the Palestine Exploration Quarterly Statement.*

SIR,—I think it will be as difficult for Rev. W. F. Birch to maintain that the "garrison" (A.V.) which 1 Samuel xiii, 3 and 4 tells us Jonathan smote, *could not* be a boundary stone or pillar, as for Captain Conder to show that it is at all *probable* that it was such a pillar that is spoken of throughout chapter xiv.

Three words are used, and though different, are so allied that two of them are in other cases rendered "garrison," "pillar," "image," &c.

May we not, however, succeed in reconciling both views ?

At any rate it seems clear that the actual signification must be sought in the context in each case, remembering that the root idea in all appears to be something "set up" or "placed" in a particular spot.

We use the word "post" as meaning not only a wooden or iron "post" or pillar, but also of a military "post"—outpost or garrison.

Evidently the common idea is that of something placed in a certain position, *there to remain*, whether by inertness of matter in the former case, or by faithful attention to duty of those engaged, in the latter.

Considering, then, that in Genesis xix, 26, Lot's wife is said to have been turned into "a כַּיִת" (pillar) "of salt," it cannot be impossible that the same word in 1 Samuel x, 5 might signify a (boundary) *pillar*, of the same nature, and perhaps even actually the same as that which Lieutenant Conder supposed to have been the subject of the attack by Jonathan recorded in xiii, 3 and 4, where the word again occurs, and the "smiting" of which was the cause of the eruption of the Philistines recorded in the rest of the chapter.

But, on the other hand, in xiii, 23, where מִצְבָּה is used, and the verse reads, "the garrison of the Philistines *went out* to the passage of Mich-mash," the expression can hardly be used of a boundary stone. In the next chapter (xiv), where this word is used throughout, except in verse 12, its meaning in verses 1 and 4 would be uncertain, but that they evidently refer to the same object of Jonathan's attention as is mentioned in verses 6, 11, and 12. In verse 12 מִצְבָּה is used, and this in other places is translated *pillar* sixteen times and *image* nineteen.

If a stone were meant, the words of Jonathan in verse 6, "there is no restraint to the Lord to save by many or by few," would have no reference to their immediate object, though it might be supposed that he was thinking of the remoter consequences of his proposed act, but for verse 8 where he continues, "we will pass over unto these *men* and *discover* ourselves unto them," followed by verse 11, where we are told that "both of them *discovered* themselves unto the *garrison*," by the "*men*" of which (verse 12) they were "*answered*" in a way which showed that "the Lord hath *delivered* them into their hand" (verses 10 and 12). *Here* a Philistine outpost is evidently meant.

Yours obediently,

June 25th, 1883.

H. B. S. W.

# LIST OF DONATIONS AND SUBSCRIPTIONS.

SEPTEMBER 20TH, 1882, TO DECEMBER 22ND, 1882.

*a* denotes Annual Subscriber.

\* \* \* If any omission or mistake be observed in the following lists, the Secretary will be very glad to be informed of it, and will rectify the error in the next *Quarterly Statement*.

	£ s. d.		£ s. d.
<i>a</i> Dr. H. Adler .. ..	0 10 6	Brought forward	42 19 6
<i>a</i> C. S. Alexander, Esq. .. ..	1 1 0	<i>a</i> Rev. W. J. Edwards .. ..	0 10 6
<i>a</i> Mrs. Anderson .. ..	3 0 0	<i>a</i> John Elliott, Esq. .. ..	1 1 0
<i>a</i> The Right Rev. the Lord Bishop of Antigua .. ..	1 1 0	<i>a</i> Rev. C. L. Engstrom .. ..	0 5 0
<i>a</i> Rev. W. J. Askwith .. ..	1 1 0	<i>a</i> Rev. W. H. Evans .. ..	1 0 0
<i>a</i> Rev. L. R. Ayre .. ..	1 1 0	<i>a</i> W. Ewart, Esq. M.P. .. ..	1 0 0
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<i>a</i> John Brewster, Esq. .. ..	1 1 0	<i>a</i> Hon. and Rev. O. Forester (1881-82) .. ..	1 10 0
<i>a</i> Rev. J. S. Broad .. ..	0 10 6	<i>a</i> Miss Forster .. ..	1 1 0
<i>a</i> The Misses Butcher .. ..	1 1 0	<i>a</i> R. Foster, Esq. .. ..	0 10 0
<i>a</i> Rev. Canon Butler .. ..	1 1 0	<i>a</i> J. H. Fox, Esq. .. ..	1 1 0
<i>a</i> Miss Capel .. ..	0 10 0	<i>a</i> Dr. Fraser .. ..	1 1 0
<i>a</i> A. Cater, Esq. .. ..	1 0 0	<i>a</i> Rev. J. A. Freer .. ..	1 1 0
<i>a</i> Rev. W. Champernowne .. ..	1 1 0	<i>a</i> Miss Garnett .. ..	1 0 0
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<i>a</i> Rev. F. Cook .. ..	0 10 6	<i>a</i> Sir F. Goldsmid, (1881-82) .. ..	2 2 0
<i>a</i> Dr. Cooke .. ..	1 1 0	<i>a</i> H. Goodman (1880-81) .. ..	2 0 0
<i>a</i> C. C. Cox, Esq. .. ..	1 0 0	<i>a</i> Hon. Mrs. A. Gore (1880-82) .. ..	3 3 0
<i>a</i> Andrew Crosbie .. ..	0 10 6	<i>a</i> Mrs. Gorham .. ..	0 10 0
<i>a</i> Mrs. Cruikshank .. ..	1 0 0	<i>a</i> The Right Rev. the Lord Bishop of Goulburn.. ..	1 1 0
<i>a</i> General Daubeney (1881) .. ..	1 1 0	<i>a</i> R. Govett, Esq. .. ..	1 0 0
<i>a</i> Rev. J. M. Davenport (1880-82)	3 3 0	<i>a</i> J. G. Greaves, Esq. (1881-82) .. ..	1 1 0
<i>a</i> Rev. J. Davidson .. ..	0 10 0	<i>a</i> Rev. H. M. Green .. ..	0 10 0
<i>a</i> Mrs. Dennis .. ..	0 10 6	<i>a</i> W. Green, Esq. .. ..	1 0 0
<i>a</i> M. H. W. Devenish, Esq. .. ..	1 1 0	<i>a</i> Mrs. Greenfield .. ..	2 2 0
<i>a</i> J. B. Dewhurst, Esq. .. ..	2 2 0	<i>a</i> Rev. W. J. Greenstreet (1881-82) .. ..	1 1 0
<i>a</i> J. Dodgson, Esq. .. ..	0 10 6	<i>a</i> Mrs. Greenwood .. ..	5 0 0
<i>a</i> Rev. J. D. Dodgson (1881-82)	1 1 0	<i>a</i> Mrs. Gregg .. ..	1 1 0
<i>a</i> Rev. R. Drake .. ..	2 2 0	<i>a</i> G. P. Griffiths, Esq. .. ..	0 10 6
<i>a</i> Rev. Oswald Dykes (1881-82)	2 2 0	<i>a</i> F. W. Groves, Esq. .. ..	0 10 6
<i>a</i> Rev. E. P. Eddrupp .. ..	0 10 6		

Carried forward £42 19 6

Carried forward £99 12 0

LIST OF SUBSCRIPTIONS.

	£	s.	d.		£	s.	d.
Brought forward	99	12	0	Brought forward	171	6	0
<i>a</i> Mrs. Guise .. .. 1 0 0	<i>a</i> H. Ormerod, Esq. .. .. 10 0 0						
<i>a</i> Miss Hardinge .. .. 1 1 0	<i>a</i> W. Parkin, Esq. .. .. 0 10 6						
<i>a</i> Rev. W. L. Hardisty (1880-82) 1 11 6	<i>a</i> Miss Partridge .. .. 1 0 0						
<i>a</i> Rev. A. Harland .. .. 0 10 6	<i>a</i> Mrs. Percy .. .. 1 1 0						
<i>a</i> Dr. Harper .. .. 1 1 0	<i>a</i> Captain Petrie .. .. 1 1 0						
<i>a</i> Rev. R. M. Hawkins .. .. 1 1 0	<i>a</i> Miss Pim (1881-82) .. .. 2 2 0						
<i>a</i> Rev. T. Helmore .. .. 0 10 0	<i>a</i> Mrs. Plaisto .. .. 0 10 0						
<i>a</i> Rev. A. Henderson .. .. 0 10 0	<i>a</i> Mrs. Pryor .. .. 1 1 0						
<i>a</i> Rev. T. E. Heygate .. .. 1 1 0	<i>a</i> "R" .. .. 0 10 6						
<i>a</i> Rev. W. E. Heygate (1879-82) 2 0 0	<i>a</i> Religious Tract Society (1880-82) .. .. 3 3 0						
<i>a</i> Miss Hill (1881-82) .. .. 1 0 0	<i>a</i> Rev. C. L. Reynolds .. .. 1 1 0						
<i>a</i> Rev. E. Hoare .. .. 0 10 6	<i>a</i> Rev. J. Richardson .. .. 2 2 0						
<i>a</i> A. Hodgetts, Esq. .. .. 1 1 0	<i>a</i> Rev. P. Philpinde Rivières .. .. 0 5 0						
<i>a</i> Miss A. Hodgson .. .. 0 10 0	<i>a</i> Rev. T. Rigaud .. .. 1 0 0						
<i>a</i> Rev. G. Horner .. .. 1 1 0	<i>a</i> Mrs. Robson .. .. 1 1 0						
<i>a</i> Rev. J. Howat .. .. 0 2 6	<i>a</i> Captain H. Rogers .. .. 1 0 0						
<i>a</i> T. Hutchinson, Esq. .. .. 0 10 6	<i>a</i> J. Rowntree, Esq. .. .. 0 10 6						
<i>a</i> Mrs. Hutchinson .. .. 1 1 0	<i>a</i> Rev. L. H. Rumsey .. .. 0 10 6						
<i>a</i> A. Hyne .. .. 0 10 6	<i>a</i> Messrs. Rutherford Bros. .. .. 1 0 0						
<i>a</i> Rev. J. Izard .. .. 0 10 6	<i>a</i> St. Bees' College .. .. 1 1 0						
<i>a</i> Miss Jackson .. .. 1 0 0	<i>a</i> Dr. Sandreeski .. .. 0 10 0						
<i>a</i> A. W. Jones .. .. 5 0 0	<i>a</i> Miss Sawyer .. .. 0 10 6						
Do. (don.) .. .. 5 0 0	<i>a</i> Rev. Canon Searth .. .. 1 1 0						
<i>a</i> Miss Kearsley (don.) .. .. 0 2 0	<i>a</i> Mrs. Seekham .. .. 0 10 0						
<i>a</i> Rev. J. G. Kitchin .. .. 0 10 0	<i>a</i> Miss Sharpe .. .. 0 10 6						
<i>a</i> J. D. Lamb, Esq. .. .. 1 1 0	<i>a</i> Rev. R. Shepherd .. .. 0 5 0						
<i>a</i> Rev. W. H. Lang .. .. 0 10 0	<i>a</i> Rev. A. C. Smith .. .. 0 10 6						
<i>a</i> Rev. F. Lawrence .. .. 1 1 0	<i>a</i> Lady Smith .. .. 5 0 0						
<i>a</i> Miss Leach .. .. 0 10 0	<i>a</i> J. G. Smyth, Esq. .. .. 2 2 0						
<i>a</i> General Sir H. Lefroy (1881-82) .. .. 2 2 0	<i>a</i> Dr. Soulsby .. .. 0 10 6						
<i>a</i> G. B. Lewis, Esq. (1879-83) 2 12 6	<i>a</i> Major Speed .. .. 1 1 0						
<i>a</i> Captain Owen Lloyd (1881-82) 1 0 0	<i>a</i> Mark Stirrup, Esq. .. .. 0 10 6						
<i>a</i> Mrs. Lloyd (1881-82) .. .. 1 0 0	<i>a</i> J. A. Strachan, Esq. .. .. 0 10 0						
<i>a</i> J. Long, Esq. .. .. 1 1 0	<i>a</i> M. W. Strang.. .. 0 10 6						
<i>a</i> Rev. W. Lowther .. .. 0 10 6	<i>a</i> H. Sulley, Esq. .. .. 0 10 6						
<i>a</i> David Lumsden, Esq. .. .. 1 0 0	<i>a</i> Miss Sykes .. .. 0 10 6						
<i>a</i> Miss Maeauly (1880-82) .. .. 1 11 6	<i>a</i> H. Ffoulkes Taylor, Esq. .. .. 0 10 6						
<i>a</i> W. K. MacDonald, Esq. .. .. 1 0 0	<i>a</i> Rev. G. W. Taylor .. .. 1 0 0						
<i>a</i> D. Macdonald, Esq. .. .. 1 0 0	<i>a</i> J. G. Thompson, Esq. (1881-82) .. .. 2 2 0						
<i>a</i> Rev. A. Mackennel .. .. 1 1 0	<i>a</i> Rev. T. S. Tyacke .. .. 1 1 0						
<i>a</i> Rev. R. Macpherson .. .. 0 10 6	<i>a</i> Hon. A. Vidal .. .. 1 1 0						
<i>a</i> General Maitland (1881-82) .. .. 2 2 0	<i>a</i> E. J. Wade, Esq. .. .. 1 1 0						
<i>a</i> Lord Talbot de Malahide .. .. 1 0 0	<i>a</i> C. S. Wake, Esq. .. .. 0 10 6						
<i>a</i> Miss Marriott .. .. 0 10 6	<i>a</i> Rev. C. Watson .. .. 10 0 0						
<i>a</i> T. May, Esq. (1881-82) .. .. 2 2 0	<i>a</i> L. Watson, Esq. .. .. 1 1 0						
<i>a</i> Captain Moody .. .. 1 1 0	<i>a</i> M. Kemp-Welch, Esq. .. .. 1 0 0						
<i>a</i> J. Moody, Esq. .. .. 0 10 0	<i>a</i> J. E. Whittock, Esq. (1881-82) 2 0 0						
<i>a</i> H. H. Morrish .. .. 0 10 6	<i>a</i> Mrs. Bigoe Williams .. .. 1 0 0						
<i>a</i> Miss Muspratt .. .. 0 10 6	<i>a</i> V. A. Williamson, Esq. .. .. 1 1 0						
<i>a</i> Miss Newton .. .. 0 10 6	<i>a</i> S. Woolf, Esq. .. .. 1 1 0						
<i>a</i> W. C. Nicholson, Esq. (addl.) 0 5 0	<i>a</i> Rev. C. H. H. Wright (1881-82) .. .. 1 0 0						
<i>a</i> P. H. Officer, Esq. .. .. 5 5 0							
<i>a</i> Herr Olseen .. .. 0 10 6							
<i>a</i> "Omega" (don.) .. .. 10 10 0							
Carried forward	<b>£171</b>	<b>6</b>	<b>0</b>	Total	<b>£242</b>	<b>8</b>	<b>0</b>

LIST OF SUBSCRIPTIONS.

LOCAL SOCIETIES.

*Acknowledged in detail under special heading.*

							£	s.	d.
Aberdeen	..	..	..	..	..	..	25	3	0
Adelaide	..	..	..	..	..	..	2	15	0
Arbroath	..	..	..	..	..	..	4	16	6
Belfast	..	..	..	..	..	..	1	11	6
Brighton	..	..	..	..	..	..	13	7	6
Bristol	..	..	..	..	..	..	8	2	6
Cardiff	..	..	..	..	..	..	5	14	6
Chelmsford	..	..	..	..	..	..	7	12	0
Chichester	..	..	..	..	..	..	3	14	0
Cork	..	..	..	..	..	..	10	0	0
Falmouth	..	..	..	..	..	..	14	18	6
Greenock	..	..	..	..	..	..	24	1	0
Lewes	..	..	..	..	..	..	6	2	1
Manchester	..	..	..	..	..	..	29	18	6
Plymouth	..	..	..	..	..	..	5	4	0
Do.	..	..	..	..	..	..	5	4	6
St. Helena	..	..	..	..	..	..	12	10	0
Sydney	..	..	..	..	..	..	18	13	0
Donations and Subscriptions	..	..	..	..	..	..	199	8	1
Lectures	..	..	..	..	..	..	242	8	0
Maps and Memoirs	..	..	..	..	..	..	14	11	10
Books	..	..	..	..	..	..	315	18	2
					..	..	10	18	3
							£783	4	4

ABERDEEN LADIES' ASSOCIATION.

PER MISS MARY FORBES.

Dec. 11, 1882.—By cash .. .. .. £25 3s.

	£	s.	d.		£	s.	d.
Rev. Wm. Mearns, D.D.	..	1	0	Brought forward	10	10	6
Mrs. Garden	..	0	10	William Grant, Esq.	..	0	10
The Misses Fiddes	..	0	5	Rev. John Calder	..	0	10
Mrs. Duthie, sen.	..	0	10	Rev. Wm. Milligan, D.D.	..	0	10
Mrs. Simpson	..	0	10	Mrs. Marr	..	1	0
Colonel Kirby	..	1	1	M.	..	0	2
Jas. Gebbie, Esq. (per Col. Kirby)	0	10	6	James Mitchell, Esq.	..	1	0
Rev. James Selkirk	..	0	10	David Allan, Esq.	..	0	10
Rev. Clement de Fraye	..	0	10	Miss Johnson	..	0	5
David Mitchell, Esq.	..	0	10	Rev. Prof. Forbes, D.D.	..	0	10
S. J. Mitchell, Esq.	..	0	2	Miss Thurburn	..	0	5
John Smith, Esq.	..	1	1	Mrs. Patterson	..	0	5
Mrs. Maclure	..	0	10	Miss Spence	..	0	10
Mrs. Lumsden	..	0	10	The Misses Chalmers	..	0	5
John F. White, Esq.	..	1	1	Miss Fraser	..	0	5
William Hunter, Esq.	..	0	10	Mr. and Miss Gordon	..	0	5
James Stephen, R.N.	..	0	10	Mrs. Doak	..	0	5
Major Ross	..	0	5	George Thompson, Esq.	..	1	0
Carried forward	£10	10	6	Carried forward	£18	5	6
					3		

LIST OF SUBSCRIPTIONS.

	<i>£ s. d.</i>		<i>£ s. d.</i>
Brought forward	18 5 6	Brought forward	24 9 6
George Thompson, Esq., York	1 0 0	Miss Beard	0 5 0
Theodore Crombie, Esq.	1 0 0	Mr. and Mrs. Doak	0 10 6
Mrs. Stephen Thompson	0 10 6	Rev. George Smith	0 10 6
William Henderson, Esq.	0 10 6		<hr/>
James Rose, Esq.	0 10 6		£25 15 6
John Crombie, Esq.	1 1 0	Less expenses	0 12 6
O. L. Stephen, Esq.	1 1 0		<hr/>
Mrs. John Crombie	0 10 6		£25 3 0
Carried forward	<b>£24 9 6</b>		<hr/>

ARBROATH.

Nov. 7, 1882.—By cash .. .. .. £4 16s. 6d.

	<i>£ s. d.</i>		<i>£ s. d.</i>
James Muir, Esq.	0 10 0	Brought forward	3 19 0
Alex. Petrie, Esq.	0 2 6	George Sturrock, Esq.	0 2 6
W. Salmond & Sons	0 10 0	G. W. Laird, Esq.	0 5 0
James Shanks, Esq.	0 10 6	W. Salmond, Esq.	0 5 0
D. Fraser & Sons	0 10 0	Wm. Rollo, Esq.	0 10 0
F. Webster & Sons	0 5 0		<hr/>
Alex. Gordon, Esq.	1 1 0	Expenses	5 1 6
George Lyon, Esq.	0 5 0		0 5 0
Alex. Ferguson, Esq.	0 5 0	Total	<b>£4 16 6</b>
Carried forward	<b>£3 19 0</b>		<hr/>

BELFAST.

Oct. 21th, 1882.—By cash .. .. .. £1 11s. 6d.

	<i>£ s. d.</i>
Rev. Dr. Bellis	0 10 6
Dr. Watts	0 10 6
Rev. Dr. Killen (don.)	0 10 6

BRIGHTON.

	<i>£ s. d.</i>
Oct. 6, 1882.—By cash	0 10 6
Dec. 4, 1882.—By cash	12 17 0
	<hr/>
Rev. R. Hudson	0 10 6
Mdlle. de Paris	1 1 0
The Misses Carr	1 1 0
Miss Cobham	1 1 0
Miss Riddings	5 0 0
Miss M. Riddings	5 0 0

## LIST OF SUBSCRIPTIONS.

### BRISTOL AND CLIFTON ASSOCIATION.

Nov. 8, 1882.—By cash .. .. £8 2s. 6d.

		£ s. d.		£ s. d.
Lord Rollo .. ..	.. 1 1 0		Brought forward .. ..	8 4 0
Miss Russell .. ..	.. 1 0 0		Misses Douglas, .. ..	0 5 0
W. F. Lavington .. ..	.. 1 1 0		Miss Ware .. ..	0 5 0
Rev. C. H. Wallace .. ..	.. 1 0 0		Rev. Canon Mather .. ..	0 5 0
Miss Moor .. ..	.. 1 0 0		Rev. T. H. Clark .. ..	0 5 0
T. Howard, Esq. .. ..	.. 0 10 6		Miss Notley .. ..	0 1 0
Misses Richards .. ..	.. 0 10 0			
T. Pease, Esq. .. ..	.. 0 10 6			9 5 0
Misses Mills .. ..	.. 0 10 6		Less expenses .. ..	1 2 6
E. W. Bird, Esq. .. ..	.. 0 10 6			
Mrs. Macworth .. ..	.. 0 10 0			£8 2 6
		<hr/>		<hr/>
	Carried forward .. ..	£8 4 0		

### CARDIFF.

		£ s. d.
Dec. 12, 1882.—By cash .. ..	.. .. ..	3 12 6
Dec. 22, 1882.—By cash .. ..	.. .. ..	2 2 0
		<hr/>
John McConochie, Esq. (1880-81) .. ..	.. .. ..	£ s. d.
Dr. Taylor (1881-83) .. ..	.. .. ..	1 0 0
Robert Oliver Jones, Esq. (1882-83) .. ..	.. .. ..	1 11 6
G. H. Howard, Esq. (1880-84) .. ..	.. .. ..	1 1 0
		2 2 0

### CHELMSFORD.

		£ s. d.
Nov. 14, 1882.—By cash .. ..	.. .. ..	£ s. d.
Nov. 23, 1882.—By cash .. ..	.. .. ..	6 11 0
		<hr/>
Mr. Tidboale .. ..	.. .. .. ..	1 1 0
Rev. H. F. Johnson .. ..	.. .. .. ..	1 1 0
Mr. Straight .. ..	.. .. .. ..	0 5 0
Mr. J. S. Reeve .. ..	.. .. .. ..	6 10 6
Miss Anna Seabrook .. ..	.. .. .. ..	0 10 6
Mr. S. Turner .. ..	.. .. .. ..	0 10 6
W. W. Pery, Esq. .. ..	.. .. .. ..	2 2 0
Mr. Coleman .. ..	.. .. .. ..	0 10 6
Mrs. Holgate .. ..	.. .. .. ..	1 1 0

LIST OF SUBSCRIPTIONS.

CHICHESTER.

PER MRS. EYRE SMITH.

Dec. 13, 1882.—By cash	..	..	..	..	£3 14s.
					£ s. d.
Mrs. Durnford	..	..	..	..	0 10 0
Miss Newland	..	..	..	..	0 10 0
Rev. George Langdale	..	..	..	..	0 10 0
Mrs. Campbell	..	..	..	..	0 10 6
Mrs. Pigott	..	..	..	..	0 10 6
Mrs. H. Smith	..	..	..	..	0 10 6
Miss Elliott (don.)	..	..	..	..	0 2 6
Rev. Prebendary Bowles	..	..	..	..	0 10 0

COUNTY AND CITY OF CORK.

Dec. 19, 1882.—By cash	..	..	..	..	£10.
					£ s. d.
The O'Donovan	..	..	..	..	2 0 0
Rev. Horace T. Fleming	..	..	..	..	0 10 0
Mrs. Hunt	..	..	..	..	1 0 0
Miss A. Hunt	..	..	..	..	1 0 0
Mrs. Maunsell	..	..	..	..	1 0 0
Mr. Pigott	..	..	..	..	1 0 0
Henry S. Perry, Esq. (Hon. Sec.)	..	..	..	..	1 0 0
Captain Perry	..	..	..	..	1 0 0
J. Seymour Romilly, Esq.	..	..	..	..	0 10 0
Miss Perry Sheares	..	..	..	..	1 0 0

FALMOUTH.

Dec. 5 1882.—By cash .. .. .. £14 18s. 6d.

	£ s. d.	Brought forward	£ s. d.
Edward Banks, Esq.	0 10 0	10 13 0	
Rev. J. H. Bennett	0 5 0		0 10 0
Edmund Carlyon, Esq.	2 2 0		1 0 6
Rev. J. Lemon Church	0 10 0		0 10 0
Miss Enys	1 0 0		1 0 0
Rev. W. Fookes	0 10 6		0 10 0
Miss Fox	1 1 0		1 1 0
Robert Fox, Esq.	1 1 0		
Fras. Edward Fox, Esq.	1 1 0		
R. Reynolds Fox, Esq.	1 1 0		
A. Lloyd Fox, Esq.	1 1 0		
Rev. George Hext	0 10 6		
Carried forward	£10 13 0	Total ..	£14 18 6
		Less expenses ..	0 6 0

LIST OF SUBSCRIPTIONS.

GREENOCK.

Sept. 29, 1882.—By cash .. .. .. £24 1s.

	£	s.	d.		£	s.	d.
James Stewart, Esq., M.P. ..	1	1	0	Robert Kerr, Esq. ..	..	1	1
John Macgregor, Esq. ..	1	1	0	Alexander Currie, Esq. ..	..	1	1
Robert Little, Esq. ..	1	1	0	Mrs. Andrew Carmichael ..	..	1	1
William M'Clure, Esq. ..	1	1	0	Donald MacDonald, Esq. ..	..	1	1
Alexander Scott, Esq. ..	1	1	0	Colin S. Caird, Esq. ..	..	1	0
Abram Lyle, Esq. ..	1	1	0	D. D. Adamson, Esq. ..	..	0	10
James Morton, Esq. ..	1	1	0	George R. MacDougall, Esq. ..	..	0	10
Edward Blackmore, Esq. ..	1	1	0	J. H. Carmichael, Esq. ..	..	0	10
Robert Binnie, Esq. ..	1	1	0	Thomas Carmichael, Esq. ..	..	0	10
D. MacDougall, Esq. ..	1	1	0	John Marquis, Esq., Liverpool	1	1	0
Thomas Prentice, Esq. ..	1	1	0	James Miller, Esq., Rothesay	1	1	0
D. MacEachran, Esq. ..	1	1	0	Rev. Alex. Walker, Millport,			
John W. Hutchinson, Esq. ..	1	1	0	Isle of Cumbrae .. ..	..	1	0

LEWES.

Oct. 24, 1882.—By cash .. .. .. £6 2s. 1d.

	£	s.	d.
E. A. Nicholson, Esq. ..	..	..	0 10 6
Mrs. Grantham ..	..	..	0 5 0
The Worshipful Mayor of Lewes ..	..	..	1 1 0
J. L. Parsons, Esq. ..	..	..	0 10 6
Caleb Kemp, Esq. ..	..	..	0 10 6
Miss Rickman ..	..	..	1 0 0
Balance of collection at meeting ..	..	..	2 4 7

MANCHESTER.

	£	s.	d.
Oct. 3, 1882.—By cash .. .. ..	9	4	0
Nov. 10, " .. .. ..	5	10	0
Nov. 27, " .. .. ..	3	13	6
Dec. 13, " .. .. ..	6	16	6
Dec. 15, " .. .. ..	3	13	6
Dec. 21, " .. .. ..	1	1	0
	29	18	6
On Nov. 27, for <i>Quarterly Statements</i> .. .. ..	0	4	0
	£30	2	6
Remitted previously .. .. ..	42	6	2
Total for 1882 .. .. ..	£72	8	8

LIST OF SUBSCRIPTIONS.

	£ s. d.		£ s. d.
Rev. E. C. Carleton (don.)	.. 0 10 6	aJames R. Barlow, Esq.	.. 0 10 6
aRev. E. C. Hore	.. 0 10 6	aJoseph Yates, Esq.	.. 1 1 0
aJ. H. Montgomery, Esq.	.. 1 1 0	aRev. Canon Tonge	.. 0 10 6
aJ. F. Robinson, Esq.	.. 1 1 0	aJ. B. Lee, Esq.	.. 0 10 6
aJames Heelis, Esq.	.. 1 1 0	aRev. Canon Woodhouse	.. 0 10 6
aRev. H. D. Rawnsley (1882-83)	1 1 0	aArchdeacon Anson	1 1 0
aJ. A. Eastwood, Esq.	.. 0 10 6	aJohn Napier, Esq.	.. 1 0 0
aC. G. Rookwood, Esq.	.. 0 10 6	aRev. J. W. Consterdine	.. 0 10 6
aMiss Lowe	.. .. 1 1 0	aJoseph Rice, Esq.	.. 1 1 0
aMiss A. Lowe	.. .. 1 1 0	aRev. H. A. Crosbie	.. 1 1 0
aArchdeacon Birch	.. .. 1 1 0	aRev. Dr. Rogers	.. 1 1 0
aRev. W. Symonds	.. .. 0 10 6	aMrs. Ryder Richardson	.. 1 1 0
aRev. A. Haworth	.. .. 0 10 6	aJ. H. Grafton, Esq.	.. 1 1 0
aRev. T. H. Guest	.. .. 0 10 6	aOliver Heywood, Esq.	.. 2 2 0
aRev. G. Burwell	.. .. 1 1 0	aJabez Johnson, Esq.	.. 1 1 0
aMisses Sharp	.. .. 1 1 0	Rev. G. W. Reynolds	.. 0 10 6
aT. W. Freston, Esq.	.. .. 1 1 0		

PLYMOUTH.

	£ s. d.
Sept. 23, 1882.—By cash	.. .. .. 5 4 0
Nov. 29, 1882.—By cash	.. .. .. 4 14 6
Dec. 4, 1882.—By cash	.. .. .. 0 10 0

£10 8 6

	£ s. d.		£ s. d.
Rev. J. Risk, M.A.	.. 0 10 6	Mrs. Guswell	.. .. 0 2 6
H. B. S. Woodhouse, Esq.	.. 1 1 0	J. Carkeet, Esq.	.. .. 0 2 6
Mrs. Woodhouse	.. .. 0 10 6	W. Short, Esq.	.. .. 0 1 0
Rev. H. A. Greaves	.. .. 0 5 0	D. McK.	.. .. 0 1 0
Thomas Pitts, jun., Esq.	.. .. 0 5 0	W. J. White, Esq.	.. .. 0 2 0
W. T. Hutchens, Esq.	.. .. 0 5 0	W. W. Anthony, Esq.	.. .. 0 2 0
Wm. Babb, Esq.	.. .. 0 5 0	E. P. Martin, Esq.	.. .. 0 2 0
Thomas Goard, Esq.	.. .. 0 5 0	John Windeast, Esq.	.. .. 2 2 0
H. A. W.	.. .. 0 5 0	Captain Inskip, R.N.	.. .. 0 10 6
Mrs. H. A. W.	.. .. 0 5 0	Edward James, Esq.	.. .. 0 10 6
H. Evers, Esq.	.. .. 0 4 0	J. N. Bennett, Esq.	.. .. 0 10 6
W. C. Nicholson, Esq.	.. .. 0 5 0	H. Greenway, Esq.	.. .. 0 10 6
Wm. King, Esq.	.. .. 0 2 6	J. Shelly, Esq.	.. .. 0 10 6
W. Angear, Esq.	.. .. 0 2 6	Miss Bragg	.. .. 0 10 0

ST. HELENA.

Dec. 21, 1882.—By cash

	£ s. d.		£ s. d.
His Excellency Governor Jänisch, C.M.G.	.. 0 10 6	Brought forward	4 14 6
A. N. St. Quintin, Esq., D.A.C.G.	0 10 6	Mr. W. H. Marriott	.. 0 10 6
B. N. C. Knipe, Esq., A.C.S.	0 10 6	Mr. B. Grant	.. 0 10 6
Lieut. Turton, R.E.	.. 0 10 6	Rev. Canon Lambert, F.R.G.S. (Hon. Sec.)	.. 0 10 6
J. Archibald, Esq.	.. 0 10 6		
R. Noble, Esq.	.. 0 10 6		
T. Woodman, Esq.	.. 0 10 6		
St. Helena Lodge of Freemasons, 488	.. 0 10 6		
Old Rock Lodge of Freemasons,	.. 0 10 6		
912	.. .. .. 0 10 6		
Carried forward	£4 14 6		
			£12 10 0

LIST OF SUBSCRIPTIONS.

SYDNEY AND NEW SOUTH WALES.

		£ s. d.		£ s. d.
Dec. 19, 1882.—By cash	..	..	5 0 0	
Dec. 18, 1882.—By cash	..	..	3 19 0	
Dec. 4, 1882.—By cash	..	..	9 14 0	
Lady Allen .. .. ..	1 1 0		Brought forward	12 9 0
Mrs. G. Allen .. .. ..	1 1 0		Rev. Andrew Gardiner, M.A.	1 1 0
Mrs. W. B. Boyce .. .. ..	1 1 0		J. S. Adam, Esq.	.. 1 1 0
Rev. Dr. Moore White .. .. ..	2 2 0		Rev. F. Hibberd .. ..	2 2 0
Mrs. Pope .. .. ..	1 0 0		Rev. James Cameron, M.A. ..	1 1 0
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Benjamin Short, Esq. .. .. ..	1 1 0		The Very Rev. the Dean Cowker, M.A. .. ..	0 10 6
Mrs. Barry .. .. ..	1 0 0			
Lady Hay .. .. ..	1 0 0			
Rev. Dr. Steel .. .. ..	1 1 0		Less expenses .. ..	£19 5 6
Rev. C. Stewart, M.A. .. .. ..	1 1 0			0 12 6
Carried forward £12 9 0				
				<u>£18 13 0</u>

N.B.—One guinea was also remitted on December 18th, in payment for maps.

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BY JAMES ROSE, Esq.

1882.	Receipts.			
	£	s.	d.	
Sept. 20.—Norwich..	..	..	..	14 0 8
" 26.—Lancaster ..	..	..	..	3 11 4
" 28.—Burnley ..	..	..	..	6 5 2
Oct. 3.—Runcorn ..	..	..	..	1 5 0
" 9.—Lewes ..	..	..	..	3 3 2
" 23.—St. Leonards ..	..	..	..	1 8 0
Nov. 3.—Dundalk ..	..	..	..	1 5 6

BY REV. HENRY GEARY.

Nov. 16.—Leamington (two lectures)	..	..	12 19 10
" 23.—Eastbourne ..	..	..	6 18 9
" 29.—Kingston-on-Thames ..	..	..	5 11 0
Dec. 11.—Shrewsbury ..	..	..	7 16 10
" 12.—Oswestry ..	..	..	6 0 2
" 13.—Ellesmere ..	..	..	7 0 4
" 14.—Market Drayton ..	..	..	5 19 0
" 15.—Wellington (Salop) ..	..	..	4 16 9

BY WILLIAM PEARSON, Esq.

Nov. 10.—Johnstone Parish Church ..	..	..	1 5 9
Dec. 3.—Ardrossan Parish Church ..	..	..	1 19 1
" 6.—St. Peter's F. C. Hall, Glasgow ..	..	..	1 2 9
" 21.—St. John's, Greenock ..	..	..	1 6 1

BY REV. F. LAWRENCE.

Nov. 20.—Helmslay ..	..	..	2 12 0
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					£ s. d.
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Dec. 30, 1882.—F. G. Evans, Esq.	..	..	..	..	£1 1s.
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Dec. 30, 1882.—By cash	..	..	..	..	£12 12s.
					£ s. d.
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Jan. 3, 1883.—C. F. Garland, Esq.	..	..	..	£ s. d.
Expenses	..	..	..	0 1 0
				<hr/> <hr/> <hr/> £1 0 0

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<i>a</i> J. Cheetham, Esq. .. .. 1 1 0	<i>a</i> Miss Garrett .. .. 0 10 6								
<i>a</i> Rev. E. F. Campbell.. .. 0 10 0	<i>a</i> Mrs. Germon .. .. 0 10 6								
<i>a</i> Dr. Cranage .. .. 2 12 6	<i>a</i> Mrs. George .. .. 1 0 0								
<i>a</i> Dr. Corbould .. .. 0 10 6	<i>a</i> W. Gregory, Esq. .. .. 1 0 0								
<i>a</i> Mrs. G. F. Cockburn.. .. 0 10 6	<i>a</i> Messrs. Gale & Inglis .. .. 1 0 0								
<i>a</i> Sir A. Cotton .. .. 1 1 0	<i>a</i> E. W. Gere, Esq. .. .. 0 10 6								
<i>a</i> Rev. G. Christian .. .. 1 1 0	<i>a</i> J. Gadsby, Esq. .. .. 1 1 0								
<i>a</i> Miss M. A. Corrie .. .. 1 1 0	<i>a</i> Captain Goldsmid .. .. 0 10 6								
<i>a</i> Miss S. M. Corrie .. .. 1 1 0	<i>a</i> Major Gardiner .. .. 0 10 6								
<i>a</i> General Cooke .. .. 1 0 0	<i>a</i> Rev. James Graves .. .. 0 10 6								
<i>a</i> G. C. Courthorpe, Esq. .. .. 1 0 0	<i>a</i> Mrs. Goodban.. .. 0 10 0								
<i>a</i> Miss Chambers .. .. 0 10 6	<i>a</i> A. Gibbon, Esq. .. .. 1 1 0								
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<i>a</i> A. Dodgson, Esq. .. .. 0 10 6	<i>a</i> W. Gibb, Esq. .. .. 0 10 6								
<i>a</i> W. A. Dykes .. .. 1 1 0	<i>a</i> Mrs. Greer .. .. 0 10 6								
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<i>a</i> Mrs. C. Drummond .. .. 1 1 0	<i>a</i> Dr. Hutchinson .. .. 1 1 0								
<i>a</i> Captain A. Drummond .. .. 1 0 0	<i>a</i> Miss Haines .. .. 1 1 0								
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<i>a</i> Bishop of Dover .. .. 1 1 0	<i>a</i> Rev. Canon Hopkins.. .. 0 10 6								
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<i>a</i> Rev. W. Dickinson .. .. 1 1 0	<i>a</i> S. H. Hodgson, Esq. .. .. 1 1 0								
<i>a</i> Rev. T. Dalton .. .. 1 1 0	<i>a</i> E. F. Holden, Esq. .. .. 2 2 0								
<i>a</i> L'Abbé Dutan .. .. 0 10 6	<i>a</i> Rev. A. Harland .. .. 0 10 6								
<i>a</i> Rev. E. D. Eddrup .. .. 0 10 6									
	Carried forward £139 5 6	Carried forward £201 18 0							

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Brought forward 201	18	0		Brought forward 268	14	6	
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<i>a</i> Rev. F. J. Hort ..	..	2	2	<i>a</i> Rev. T. Ladds ..	..	1	1
<i>a</i> Mrs. E. T. Holland ..	..	0	10	<i>a</i> W. Lunn, Esq. ..	..	0	10
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<i>a</i> Rev. C. H. Hole ..	..	1	1	<i>a</i> Dr. Lortet ..	..	0	12
<i>a</i> Miss Halton ..	..	0	10	<i>a</i> Rev. A. Löwy ..	..	0	10
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<i>a</i> Lord Harlech ..	..	2	0	<i>a</i> W. H. Leighton, Esq. ..	..	2	2
<i>a</i> T. S. Hobbs, Esq. (2 years)	..	1	1	<i>a</i> Rev. Dr. Leishman ..	..	1	0
<i>a</i> Rev. Melsup Hill ..	..	1	1	<i>a</i> G. H. Lawrence, Esq. ..	..	1	1
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<i>a</i> Miss Hoare ..	..	1	1	<i>a</i> Literary Institution of Jerusalem ..	0	10	0
<i>a</i> H. Hebbert, Esq. ..	..	1	1	<i>a</i> F. Lambert, Esq. ..	..	1	1
<i>a</i> Mrs. Huish ..	..	1	1	<i>a</i> Mrs. F. Lambert ..	..	1	1
<i>a</i> Miss Hindmash ..	..	0	10	<i>a</i> F. Longden, Esq. ..	..	0	10
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<i>a</i> Rev. J. H. Harrison ..	..	1	1	<i>a</i> H. J. Morton, Esq. ..	..	1	1
<i>a</i> Rev. A. Howson ..	..	1	1	<i>a</i> Rev. J. McKinnell ..	..	1	1
<i>a</i> B. A. Heywood, Esq. ..	..	1	1	<i>a</i> Rev. V. Musgrave ..	..	1	0
<i>a</i> James Hilton ..	..	3	0	<i>a</i> Rev. J. Le Mesurier ..	..	1	1
<i>a</i> H. Hitchcock, Esq. ..	..	1	0	<i>a</i> Rev. J. Le Mesurier ..	..	1	1
<i>a</i> John Honeyman, Esq. ..	..	1	1	<i>a</i> C. S. Maylard, Esq. ..	..	0	10
<i>a</i> Rev. W. Inge ..	..	1	1	<i>a</i> Sir W. Muir ..	..	1	1
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<i>a</i> Mrs. H. Jenings (3 years)	..	3	0	<i>a</i> G. W. Maelagan, Esq. ..	..	1	1
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<i>a</i> T. M. Johnson (3 years)	..	1	11	<i>a</i> A. McArthur, Esq. ..	..	1	1
<i>a</i> W. Jones, Esq. ..	..	1	11	<i>a</i> Rev. Paul Methuen ..	..	0	10
<i>a</i> Rev. S. W. Johnson ..	..	0	10	<i>a</i> Rev. J. H. Mullins ..	..	1	1
<i>a</i> Mrs. Calvert Jones (1881-83)	3	0	0	<i>a</i> Henry Morris, Esq. ..	..	1	0
<i>a</i> Bev. O. Jones ..	..	0	10	<i>a</i> Bishop of Moray and Ross ..	..	1	1
<i>a</i> F. F. J'Anson, Esq. ..	..	2	2	<i>a</i> J. Morris, Esq. ..	..	1	1
<i>a</i> Hitchin Kemp, Esq. ..	..	1	1	<i>a</i> Rev. John McColl ..	..	0	10
<i>a</i> Rev. J. Hitchin ..	..	0	10	<i>a</i> Rev. J. H. Murray ..	..	1	1
<i>a</i> Mrs. E. Kemble ..	..	1	1	<i>a</i> Mrs. Miland ..	..	2	0
<i>a</i> W. Kay, Esq. ..	..	0	10	<i>a</i> Miss Martin ..	..	1	1
<i>a</i> Miss Kay ..	..	0	10	<i>a</i> J. Myers, Esq. ..	..	0	10
<i>a</i> J. H. King, Esq. ..	..	0	10	<i>a</i> W. B. Maingay, Esq. ..	..	1	1
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<i>a</i> T. J. Kent, Esq. (3 years)	..	6	6	<i>a</i> Mrs. Murray ..	..	0	10
<i>a</i> Captain Kitchener ..	..	1	0	<i>a</i> Mons. Moniquet ..	..	0	10
<i>a</i> Mrs. King ..	..	1	1	<i>a</i> Rev. J. H. Moore ..	..	1	0
<i>a</i> J. Kirkpatrick, Esq. ..	..	1	1	<i>a</i> Rev. A. Melville ..	..	1	1
<i>a</i> W. Lindley, Esq. ..	..	0	10	<i>a</i> Miss H. Mills ..	..	1	1
<i>a</i> Miss Julia Lindley ..	..	0	10	<i>a</i> Rev. A. M. Morrison ..	..	5	0
<i>a</i> W. Lavers, Esq. ..	..	0	10	<i>a</i> Miss Mulholland ..	..	1	1
<i>a</i> L. H. S. Leicester, Esq. ..	..	1	1	<i>a</i> Rev. J. Marshall ..	..	1	1
<i>a</i> Rev. R. Lorimer ..	..	0	10	<i>a</i> A. McVicker, Esq. ..	..	0	10
<i>a</i> Rev. W. Lancee ..	..	1	0	<i>a</i> Mrs. A. Mills (3 years)	..	3	3

Carried forward £268 14 6

Carried forward £326 2 0

LIST OF SUBSCRIPTIONS.

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Brought forward	326	2	0	Brought forward	381	8	0
"In Memoriam"	..	..	2 0 0	aDr. Peebles	..	..	1 0 0
aMrs. Mitchell ..	..	..	1 1 0	aW. Dunkley Paine, Esq.	..	..	8 8 0
aRev. P. Mearns ..	..	..	0 10 6	aJ. A. Phillips, Esq.	..	..	0 10 6
aS. S. Martin, Esq. ..	..	..	1 1 0	aJ. Pollard, Esq.	..	..	1 1 0
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aRev. F. R. Napier ..	..	..	1 1 0	aMrs. Pattenson ..	..	..	0 10 6
aBishop of Nelson ..	..	..	1 1 0	aRev. T. R. Purell ..	..	..	0 10 6
aF. Newth, Esq. ..	..	..	1 1 0	aC. S. Parker, Esq. ..	..	..	1 1 0
aJ. Noble, Esq. ..	..	..	2 0 0	aMiss Phipson (1882-83) ..	..	..	1 1 0
aH. J. Norton, Esq. ..	..	..	0 10 0	aH. Peto, Esq. ..	..	..	2 0 0
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aRev. W. O. Newnham ..	..	..	1 1 0	aRev. Canon Rogers ..	..	..	0 10 0
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aMrs. Newnham ..	..	1 10 0		aW. Reeves, Esq. ..	..	..	0 10 0
aLady Augusta Onslow ..	..	2 2 0		aRev. J. Rigaud ..	..	..	0 10 6
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aRev. A. Ormerod ..	..	..	1 1 0	aRev. D. D. Robertson ..	..	..	1 1 0
aMrs. Osmond ..	..	..	0 10 6	aW. J. Ridges, Esq. ..	..	..	0 10 6
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aH. Prigg, Esq. (1882-83) ..	..	1 0 0		aRev. G. S. Rowe ..	..	..	1 1 0
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aCaptain Philip ..	..	..	3 3 0	aMrs. Roscoe ..	..	..	1 1 0
aRev. W. Preston ..	..	..	1 1 0	aCuthbert Robinson, Esq. ..	..	..	0 10 6
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aRev. C. Penny ..	..	..	0 10 0	aA. Ross, Esq. ..	..	..	0 10 6
aH. Pringle, Esq. ..	..	..	0 10 0	aRev. R. Rutherford ..	..	..	0 10 6
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aMrs. Paley ..	..	..	0 10 6	aH. Stodart, Esq. ..	..	..	0 10 6
aRev. E. Prout ..	..	..	0 10 6	aRev. R. H. Stroud ..	..	..	0 10 0
aRev. J. E. Pryor ..	..	..	1 1 0	aT. Senhouse, Esq. ..	..	..	0 10 6
aRev. T. Pelham ..	..	..	0 10 0	aW. Sandby, Esq. ..	..	..	1 1 0
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aPaisley Institute ..	..	..	1 1 0	aMiss Street ..	..	..	1 0 0
aMiss Petit ..	..	..	1 1 0	aJ. Stilwell, Esq. ..	..	..	1 1 0
aMiss Peard ..	..	..	1 1 0	aRev. W. Stracey ..	..	..	2 2 0
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Brought forward	439	2	0	Brought forward	492	1	6		
<i>a</i> E. Strickland, Esq. ..	..	1	1	0	<i>a</i> W. L. Thompson, Esq. ..	1	1	0	
<i>a</i> H. G. Stewart, Esq. ..	..	1	1	0	<i>a</i> Union Theological Seminary ..	0	10	6	
<i>a</i> John Spence, Esq. ..	..	0	10	6	<i>a</i> Rev. W. Urwick (1882-83) ..	1	0	0	
<i>a</i> Brice Smith, Esq. ..	..	3	3	0	<i>a</i> Dr. J. Vaughan ..	..	1	1	0
<i>a</i> Rev. C. G. Scott ..	..	0	15	6	<i>a</i> E. T. Varley, Esq. ..	..	0	12	0
<i>a</i> C. Samuel, Esq. ..	..	1	1	0	<i>a</i> Miss Vickers ..	..	0	10	0
<i>a</i> R. K. Strang, Esq. ..	..	0	10	6	<i>a</i> J. Vavasseur, Esq. ..	..	1	1	0
<i>a</i> General Saxton ..	..	3	3	0	<i>a</i> Rev. G. S. Whitlock ..	..	0	10	6
<i>a</i> Colonel Smyth ..	..	1	1	0	<i>a</i> Rev. H. R. Ware (1882-83) ..	2	0	0	
<i>a</i> Miss Standridge ..	..	0	5	0	<i>a</i> C. Walton, Esq. ..	..	1	1	0
<i>a</i> R. M. Stuart, Esq. ..	..	0	10	6	<i>a</i> G. Whitwell, Esq. (1882-83) ..	1	1	0	
<i>a</i> Alfred Sutton, Esq. ..	..	1	0	0	<i>a</i> Colonel Ward ..	..	1	1	0
<i>a</i> Miss J. Sutherland ..	..	0	10	6	<i>a</i> J. Whitehead, Esq. ..	..	0	10	0
<i>a</i> G. J. Phillip Smith, Esq. ..	..	1	0	0	<i>a</i> W. C. Wood, Esq. ..	..	1	1	0
<i>a</i> J. A. Saunders, Esq. ..	..	0	10	6	<i>a</i> J. W. Wilson ..	..	1	1	0
<i>a</i> Miss Sawyer ..	..	0	10	6	<i>a</i> Rev. J. C. Woodhouse ..	..	1	1	0
<i>a</i> Miss J. Sutton ..	..	2	2	0	<i>a</i> W. Woodall, Esq. ..	..	0	10	6
<i>a</i> Rev. M. O. Stevens ..	..	0	10	6	<i>a</i> W. Walker, Esq. ..	..	2	2	0
<i>a</i> Rev. B. L. Stanhope ..	..	1	1	0	<i>a</i> W. Walker, Esq. ..	..	1	1	0
<i>a</i> Rev. E. Stead ..	..	0	10	0	<i>a</i> T. Wheeler, Esq. ..	..	1	1	0
<i>a</i> Arthur Smith, Esq. ..	..	0	10	6	<i>a</i> J. R. Wigham, Esq. ..	..	1	1	0
<i>a</i> H. C. Stuart, Esq. ..	..	1	1	0	<i>a</i> General Sir R. Wilbraham ..	..	1	1	0
<i>a</i> Miss Secretan ..	..	0	10	6	<i>a</i> W. Whitla, Esq. ..	..	0	10	6
<i>a</i> L. E. Scarth, Esq. ..	..	1	1	0	<i>a</i> Rev. Maitland Winslow ..	..	1	1	0
<i>a</i> Rev. Canon Scott ..	..	3	3	0	<i>a</i> G. F. Watts, Esq. ..	..	1	1	0
<i>a</i> Dr. Socin ..	..	0	10	6	<i>a</i> Rev. Francis M. Wyndham ..	..	1	1	0
<i>a</i> E. Shrewsbury, Esq. ..	..	0	10	0	<i>a</i> Charles Wilson, Esq. ..	..	2	2	0
<i>a</i> A. W. Sutton, Esq. ..	..	1	1	0	<i>a</i> N. C. White, Esq. ..	..	1	1	0
<i>a</i> Mrs. Taylor ..	..	0	10	0	<i>a</i> Rev. W. H. Walford ..	..	1	1	0
<i>a</i> F. F. Tuckett, Esq. ..	..	2	1	0	<i>a</i> Mrs. Wilkinson ..	..	0	10	6
<i>a</i> Rev. J. R. Turnock ..	..	0	10	6	<i>a</i> Rev. F. E. Wigram ..	..	5	5	0
<i>a</i> J. A. Trench, Esq. ..	..	0	10	6	<i>a</i> T. J. Walton, Esq. ..	..	1	1	0
<i>a</i> A. Thompson, Esq. ..	..	1	1	0	<i>a</i> J. Weldon, Esq. ..	..	1	0	0
<i>a</i> Rev. A. Taylor ..	..	0	10	6	<i>a</i> G. R. Wales ..	..	0	10	0
<i>a</i> R. Taylor, Esq. ..	..	1	1	0	<i>a</i> Mrs. D. Way ..	..	1	1	0
<i>a</i> E. Thomas, Esq. ..	..	1	0	0	<i>a</i> Miss Williams ..	..	1	1	0
<i>a</i> Rev. W. Twiss Turner ..	..	2	2	0	<i>a</i> Rev. Dr. Wray ..	..	1	1	0
<i>a</i> J. D. Thomas, Esq. ..	..	0	10	6	<i>a</i> Miss Wilson (for Miss Harris) ..	0	10	6	
<i>a</i> Mrs. Tremlett ..	..	0	10	6	<i>a</i> Mrs. Welland ..	..	1	0	0
<i>a</i> Mrs. Tufnell ..	..	0	10	0	<i>a</i> Rev. H. Westram ..	..	1	1	0
<i>a</i> Miss A. J. Tufnell ..	..	0	10	6	<i>a</i> J. E. Wakefield, Esq. (1882-83) ..	..	2	2	0
<i>a</i> Miss Taylor ..	..	1	1	6	<i>a</i> Miss Wakeham ..	..	5	0	0
<i>a</i> Captain Taylor ..	..	0	10	6	<i>a</i> Rev. D. Winter ..	..	0	15	0
<i>a</i> Sir C. Trevelyan ..	..	1	0	0	<i>a</i> H. M. Wilkinson, Esq. ..	..	0	10	0
<i>a</i> Rev. J. Taylor ..	..	1	1	0	<i>a</i> C. S. Wilkinson, Esq. ..	..	0	9	6
<i>a</i> J. Thompson, Esq. (1882-83)	1	1	0	<i>a</i> Rev. J. O. West ..	..	0	10	6	
<i>a</i> Hon. Otway Toler ..	..	1	0	0	<i>a</i> Rev. A. L. White ..	..	0	10	6
<i>a</i> R. Turnbull, Esq. ..	..	0	10	0	<i>a</i> E. Wilson, Esq. ..	..	0	10	6
<i>a</i> Miss H. Townsend ..	..	0	10	0	<i>a</i> Miss Wakeham ..	..	0	5	0
<i>a</i> F. J. Tripp, Esq. ..	..	1	1	0	<i>a</i> Miss Young ..	..	0	10	0
<i>a</i> Mrs. Thrupp ..	..	2	0	0	<i>a</i> W. B. Young, Esq. ..	..	1	1	0
<i>a</i> Mrs. W. Tufnell ..	..	1	1	0	<i>a</i> Mrs. Baring Young ..	..	1	1	0
<i>a</i> T. V. Tymms, Esq. ..	..	1	1	0	<i>a</i> Mr. H. Yates ..	..	1	0	0
<i>a</i> Rev. S. Thackwell ..	..	0	10	6					

Carried forward £492 1 6

Total £550 4 0

LIST OF SUBSCRIPTIONS.

SUMMARY.

			£	s.	d.
Subscriptions and Donations..	..	..	550	4	0
Lectures ..	..	..	74	14	8
Local Societies..	..	..	161	0	7
Maps, Memoirs, Books, &c. ..	..	..	337	14	0
			<hr/>		
			1,123	13	3
			<hr/>		

LECTURES DELIVERED

BY REV. HENRY GEARY.

			<i>Receipts.</i>		
			£	s.	d.
1883.					
Jan.	11.—St. Mark's, Hamilton Terrace..	..	26	9	0
"	16.—Folkstone ..	..	5	0	0
"	25.—Saffron Walden ..	..	5	17	6
"	30.—St. Albans ..	..	4	10	0
Feb.	2.—Uxbridge (drawing-room meeting)	..	3	1	0
"	8.—Turnham Green ..	..	5	0	0
"	15.—Uppingham School ..	..	10	0	0
"	22.—Chislehurst ..	..	18	12	10
"	23.—Croydon..	..	14	16	6
Mar.	1.—St. Augustine's, Highbury ..	..	5	5	0
"	9.—St. Thomas, Portman Square..	..	8	11	5
"	13.—Reading..	..	12	0	5
"	21.—North Mymms ..	..	3	9	0

BY WILLIAM PEARSON, ESQ.

Jan.	14.—St. Mary's Parish Church, Dumfries..	..	3	5	0
"	21.—St. Paul's, Greenock ..	..	4	4	5
"	28.—Hamilton Free Church, Glasgow ..	..	0	12	6
Feb.	16.—Parish Church, Lanark ..	..	1	1	0
"	18.—United Presbyterian Church, Perth ..	..	2	13	7
"	25.—Eglinton Street United Presbyterian Church, Glasgow ..	..	0	16	6
Mar.	19.—Parish Church, Castle Douglas ..	..	1	10	0
"	22.—Union Church, Lenzie Church, Glasgow ..	..	1	2	0
"	24.—Loriburn Street United Presbyterian Church, Dumfries ..	..	1	2	6

LIST OF SUBSCRIPTIONS.

LOCAL SOCIETIES.

*Acknowledged in detail under special heading.*

							£	s.	d.
Brighton ..	..	..	..	..	..	..	11	19	6
Blairgowrie ..	..	..	..	..	..	..	3	7	6
Bishops Waltham ..	..	..	..	..	..	..	2	2	0
Cheltenham ..	..	..	..	..	..	..	30	0	0
Cardiff ..	..	..	..	..	..	..	5	15	6
Croydon ..	..	..	..	..	..	..	14	2	6
Dunfermline ..	..	..	..	..	..	..	9	0	0
Greenock ..	..	..	..	..	..	..	4	4	5
Hastings ..	..	..	..	..	..	..	3	13	6
Hitchin ..	..	..	..	..	..	..	5	5	0
Huddersfield ..	..	..	..	..	..	..	2	6	2
Leeds ..	..	..	..	..	..	..	32	16	0
Lichfield ..	..	..	..	..	..	..	2	0	0
Leith ..	..	..	..	..	..	..	4	15	0
Manchester ..	..	..	..	..	..	..	19	18	0
Sunderland ..	..	..	..	..	..	..	2	2	0
Tunbridge ..	..	..	..	..	..	..	5	4	6
Whitby ..	..	..	..	..	..	..	2	15	0
							£161	0	7

BRIGHTON.

						£	s.	d.
Dec. 29, 1882.—By cash ..	..	..	..	..	..	4	4	0
Jan. 29, 1883.—By cash ..	..	..	..	..	..	7	15	6
						£	s.	d.
J. Lowe Reid, Esq. ..	..	..	..	..	..	2	2	0
Rev. F. J. Hill ..	..	..	..	..	..	1	0	0
Rev. J. Calvert ..	..	..	..	..	..	0	10	6
Rev. C. E. Douglas ..	..	..	..	..	..	1	1	0
H. C. Malden, Esq. ..	..	..	..	..	..	1	1	0
Rev. Dr. Robertson ..	..	..	..	..	..	1	1	0
Mrs. Soames ..	..	..	..	..	..	1	0	0

BLAIRDOWRIE.

Feb. 2, 1883.—By cash ..	..	..	..	..	..	£3	7s.	6d.
						£	s.	d.
J. C. Rattray, Esq. ..	..	..	..	..	..	0	10	6
W. Jobson, Esq. ..	..	..	..	..	..	0	10	6
Robert Chapman, Esq. ..	..	..	..	..	..	0	10	6
Rev. J. Baxter ..	..	..	..	..	..	0	10	6
W. J. Soutar, Esq. (1882)	..	..	..	..	..	0	15	0
Do. (1883) ..	..	..	..	..	..	0	10	6

BISHOPS WALTHAM.

Mar. 2, 1883.—By cash ..	..	..	..	..	..	£2	2s.	
						£	s.	d.
Rev. A. B. Burton ..	..	..	..	..	..	0	10	6
Rev. W. E. Medlicott ..	..	..	..	..	..	0	10	6
Rev. H. R. Fleming ..	..	..	..	..	..	0	10	6
Mr. James Padbury ..	..	..	..	..	..	0	10	6

#### LIST OF SUBSCRIPTIONS.

	CROYDON.			£	s.	d.
Dec. 30, 1882.—By cash	..	..	..	12	12	0
Mar. 27, 1883.—By cash	..	..	..	1	10	6
With List—Rev. H. Braithwaite	..	..	..	0	10	6
Miss Rickman	..	..	..	1	0	0

## CARDIFF.

March 21, 1882.—By cash .. .. ..	£5 5s. 6d.
1882..	£ s. d.
Rev. Canon Capel, Abengavenny .. .. ..	0 10 6
Rev. R. W. Vigors, Abergavenny (don.) .. .. ..	0 10 6
1883.	
Thomas Girdes, Esq., Bryn Glâs, Newport .. .. ..	1 1 0
Rev. W. Hughes, Ebbw Vale .. .. ..	0 10 6
Rev. John Morgan, Nantiglo Vicarage .. .. ..	0 10 6
Mr. Thomas Phillips, Blama .. .. ..	0 10 6
James McCreathe, Esq., Glasgow .. .. ..	1 1 0
F. G. Evans, Esq. .. .. ..	1 1 0

## CHELTENHAM.

## DUNFERMLINE

*Erratum.*—The name of *John Stevenson* was erroneously printed in a former list  
8 as *Robert Stevenson*.

LIST OF SUBSCRIPTIONS.

EDINBURGH.

*Subscriptions received during the year 1882.*

	£	s.	d.		£	s.	d.
John Watson, 2, Oswald-road	1	1	0	James Sime, Craigmount	1	1	0
J. T. Black, 6, North Bridge ..	0	10	6	Rev. D. F. Sandford, 6, Rut-	0	10	0
Rev. W. Turner, 5, St. Andrew-				land-square .. .. ..			
square .. .. ..	0	10	6	Misses Stevenson, 13, Randolph-			
W. Leckie, 11, Carlton-terrace	1	0	0	crecent .. .. ..	1	0	0
Alexander Hamilton, 35, Queen-				Misses Mure, 10, Darnaway-			
street .. .. ..	1	1	0	street .. .. ..	0	10	0
W. G. Dickson, 3, Royal Circus	0	10	6	Rev. Dr. Andrew Thomson, 63,			
Mrs. Gallaway, 58, Great King-				Northumberland-street ..	0	5	0
street .. .. ..	1	0	0	E. Hunter, 5, Great Stuart-			
Mrs. Mill, 35, Howe-street ..	1	0	0	street .. .. ..	0	10	0
John Hoyes, 7, Ainslie-place ..	2	0	0	Miss Ker, 11, Merchiston-park	0	10	0
Mrs. Hoyes, 7, Ainslie-place ..	1	0	0	James Watson, 45, Charlotte-			
Patrick Guthrie .. ..	0	5	0	square .. .. ..	1	1	0
J. T. Brown, Gibraltar House	1	1	0	Mrs. George Brown, 10, Doug-			
Misses Gall, 17, Minto-street ..	0	2	6	las-crecent .. .. ..	0	10	0
W. F. Burnley, 24, Ainslie-				John R. Norrie, 102, George-			
place .. .. ..	1	0	0	street .. .. ..	0	10	0
Rev. Dr. Stevenson, 9, Oxford-				James Syme, 10, Buckingham-			
terrace .. .. ..	0	10	0	terrace .. .. ..	1	0	0
Miss McMicking, 21, Coates-				Mrs. Hendley Kirkwood, North-			
gardens .. .. ..	1	1	0	end House, Trinity-road ..	0	10	0
Findlay Anderson, Inchyra				Mrs. Grainger Stewart, 19;			
Grange .. .. ..	1	0	0	Charlotte-square .. .. ..	1	1	0
W. J. Ford, 17, Grosvenor-				William Bryce, M.D., 31, Char-			
crescent .. .. ..	1	1	0	lotte-square (for self, also			
Edward Caird, 15, Belgrave-				suns collected from friends)	7	0	0
crescent .. .. ..	1	1	0	T. B. Johnston, Edina-works,			
Miss Crooks, 37, Manor-place	1	0	0	Easter-road .. .. ..	1	1	0
Mrs. Mackintosh, 19, Chalmers-				Professor Johnstone, 19, Hope-			
street .. .. ..	0	10	0	terrace .. .. ..	0	10	0
Mrs. A. Stewart, 10, Ettrick-				Mrs. Miller, St. Margaret's-road	0	10	0
road .. .. ..	0	10	6	Rev. W. Turner, 5, St. Andrew-			
J. J. Rogerson, Merchiston				square .. .. ..	0	10	6
Castle.. .. ..	1	0	0	Dr. Moir, Castle-street.. ..	1	0	0
Robert Gibson, 9, Bruntsfield-				Mrs. Edmond, 21, Comely Bank	0	5	0
place .. .. ..	0	10	0	William Dickson, 38, York-			
Rev. D. Simpson, F. C. Manse,				place .. .. ..	1	1	0
Laurencekirk .. .. ..	0	10	6	Douglas Maclagan, 28, Heriot-			
Dr. Kalley, Campo Verde, Tip-				row .. .. ..	1	1	0
perlin-road, Wilton-terrace,				Miss Mackenzie, 16, Moray-			
Morningside .. .. ..	0	10	0	place .. .. ..	2	0	0
Adam Skirling, Croys, Dadbeat-				Mrs. Brown Douglas, 26, Moray-			
tie .. .. ..	1	0	0	place .. .. ..	0	10	0
Rev. G. B. Carr, 30, Pilrig-				Mrs. Maitland, 9, Walker-street	0	5	0
street .. .. ..	0	5	0	Mrs. and Miss Paterson, 3,			
J. C. C., Edinburgh .. ..	6	0	0	Coates-crecent .. .. ..	0	10	0
R. B. Halker, 6, W. Claremont-				Scott Brothers, 125, Princes-			
street .. .. ..	0	10	6	street .. .. ..	0	5	0
Miss Black, c/o James Black,				William Lyon, 51, George-street	1	0	0
Auchentoshan House, Dunto-				Rev. Dr. Whyte, 52, Melville-			
cher .. .. ..	1	0	0	street .. .. ..	1	0	0
Gall & Inglis, 20, Bernard-				Professor A. R. Simpson, 52,			
terrace .. .. ..	1	0	0	Queen-street.. .. ..	1	1	0

LIST OF SUBSCRIPTIONS.

	£ s. d.		£ s. d.
John A. Howden, 29, Merchiston-avenue .. .. ..	1 1 0	Mrs. Morison, 12, Randolph-crescent .. .. ..	1 0 0
Rev. Dr. Teape, Findhorn-place .. .. ..	0 10 0	Bishop of Edinburgh, 10, Manor-place .. .. ..	0 5 0
Andrew Usher & Co., 24, W. Nicholson-street .. .. ..	0 10 6	Miss Buchanan, 18, Lansdowne-crescent .. .. ..	0 2 6
David Jeffrey, 14, Randolph-crescent .. .. ..	1 0 0	Mrs. Meek, 21, Rutland-square .. .. ..	0 2 6
John Turnbull, 58, Frederick-street .. .. ..	1 0 0	Alexander Padon, 5, Hart-street .. .. ..	0 10 0
J. Anderson Henry, Hay Lodge, Trinity .. .. ..	0 10 0	Thos. Nelson & Sons, Parkside .. .. ..	1 0 0
Rev. Thomas Brown, 16, Carlton-street .. .. ..	0 10 6	John Miller of Leithen, 2, Melville-crescent .. .. ..	1 1 0
Rev. Alexander Luke, F. C. Manse, Broxburn .. .. ..	1 0 0	J. Kennedy, 71, Great King-street .. .. ..	1 0 0
Major G. A. Agnew, East Wariston House .. .. ..	1 1 0	Horatius Bonar, W.S., 15, Hill-street .. .. ..	0 10 6
Peter Mill, 32, North Bridge .. .. ..	1 0 0	William Robson, 8, George-street .. .. ..	0 5 0
Union Hall Religious Mutual Improvement Association, per Peter Mill .. .. ..	0 10 6	Geo. F. Barbour of Bonskeid, 11, George-square .. .. ..	5 0 0
J. A. Jamieson, 14, Buckingham-terrace .. .. ..	0 10 0	Robert Younger, St. Ann's Brewery .. .. ..	0 10 6
J. H. Wilson, 1, E. Castle-road .. .. ..	0 5 0	David S. Dickson, W.S., 1, Thistle-court .. .. ..	0 10 6
Mrs. Seton, St. Bennets .. .. ..	0 5 0	J. Anderson Henry, Hay Lodge, Trinity .. .. ..	0 10 6
Mrs. Colonel MacDougall, Woodburn, Canaan-lane .. .. ..	1 0 0	James T. Wilson, Restalrig House .. .. ..	0 10 0
Rev. N. Wight, 47, Lauder-road .. .. ..	0 2 6	Rev. J. Calder Macphail, Pilrig Manse .. .. ..	0 5 0
Miss Macmillan, 7, Fingal-place .. .. ..	0 2 6	John M. Balfour, Pilrig House .. .. ..	0 10 6
J. R. Stewart, 10, Salisbury-road .. .. ..	0 15 0	Mrs. Hunter, 18, Abercromby-place .. .. ..	0 2 6
James Carnegie, 16, Windsor-street .. .. ..	0 5 0	The Chisholm, March Hall .. .. ..	1 0 0
R. M. Smith, 4, Bellevue-crescent .. .. ..	1 1 0	Thomas A. G. Balfour, M.D., 51, George-square .. .. ..	0 5 0
Dr. J. H. Balfour, Inverleith House .. .. ..	0 10 0	John M. McCandlish, 27, Drumsheugh-gardens .. .. ..	2 0 0
John Maenair, 33, Moray-place .. .. ..	0 10 0	John Scott Moncrieff, 19, Lyne-doch-place .. .. ..	0 10 0
James Steuart, W.S., 8, Doune-terrace .. .. ..	0 10 0	Alexander Paton, 2, Drummond-place .. .. ..	0 5 0
Mrs. Wood, 11, Clarendon-crescent .. .. ..	0 5 0	W. J. Duncan, 29, Abercromby-place .. .. ..	1 1 0
T. G. Murray, 11, Randolph-crescent .. .. ..	1 0 0	C. S. Inglis, 12, Dick-place, Grange .. .. ..	0 10 0
Sir J. Falshaw, Bart., 14, Belgrave-crescent .. .. ..	1 0 0	W. Inglis, 12, Dick-place, Grange .. .. ..	0 5 0
Very Rev. Dean Montgomery, 17, Athole-crescent .. .. ..	0 5 0	Rev. D. McDougall, Rothiemur-chus Manse, Aviemore .. .. ..	0 10 6
John Drybrough, 15, Coates-crescent .. .. ..	0 10 6	Rev. W. Balfour, Holyrood Manse, 16, St. John's Hill .. .. ..	0 10 6

LIST OF SUBSCRIPTIONS.

GREENOCK.

				£ s. d.
R. Muir, Esq., West Quay, Greenock	..	..	..	0 10 0
Rev. J. Culross, D.D., Baptist College, Bristol	..	..	..	0 10 0
Josiah Russell, Esq., Port Glasgow	..	..	..	1 0 0
Anderson Rodger, Esq., Port Glasgow	..	..	..	1 1 0
R. Paterson, Esq., Shipowner, Greenock	..	..	..	0 10 0
Rev. John Burnett, 251, Renfrew Street, Glasgow	..	..	..	0 5 0
R. Pullar, Esq., Perth (for 1882-83)	..	..	..	2 2 0
J. Whittet, Esq., Perth	..	..	..	1 1 0
R. Robertson, Esq., Solicitor, Perth	..	..	..	1 0 0
				<hr/> <b>£7 19 0</b>

HASTINGS.

Jan. 31, 1883.—By cash	..	..	..	£3 13s. 6d.
				£ s. d.
Rev. C. R. Howell	..	..	..	.. 1 1 0
G. Henry, Esq.	..	..	..	.. 0 10 6
Miss Back	..	..	..	.. 1 1 0
Rev. John Back	..	..	..	.. 1 1 0

HITCHIN.

Jan. 25, 1883.—By cash	..	..	..	..	£5 5s.
					£ s. d.
Mrs. Smyth	..	..	..	..	.. 0 10 6
J. H. Tuke, Esq.	..	..	..	..	.. 1 1 0
F. Seabohn, Esq.	..	..	..	..	.. 1 1 0
Mr. J. Gatward	..	..	..	..	.. 0 10 6
Mr. T. Priest	..	..	..	..	.. 0 10 6
J. Pollard, Esq.	..	..	..	..	.. 0 10 6
W. Ransom, Esq.	..	..	..	..	.. 1 1 0

HUDDERSFIELD.

Feb. 1, 1883.—By cash	..	..	..	..	£2 6s. 2d.
					£ s. d.
Balance last Account	..	..	..	..	.. 0 4 2
H. L. Parratt, Esq.	..	..	..	..	.. 2 2 0

LIST OF SUBSCRIPTIONS.

LEEDS..

April 2, 1883.—By cash .. . . . £32 10s.

	£ s. d.		£ s. d.
Atkinson, Rev. Canon, Audlem Vicarage, Cheshire ..	1 0 0	Harris, Miss, Oxton Hall, Yorkshire .. .. ..	1 1 0
Atkinson, J. W., Esq., St. John's, Ilkley, Yorks ..	1 1 0	Harvey, Thomas, Esq., Head- ingley, Leeds.. .. ..	1 1 0
Atkinson, Edward, Esq., Eldon House, Leeds .. ..	1 1 0	Hey, Rev. John, Clifton, York	1 1 0
Baines, Sir Edward, St. Ann's Hill, Burley .. ..	1 1 0	Holmes, John, Esq., Roundhay, Leeds.. .. .. ..	0 10 6
Baines, Fredk., Esq., Weetwood, near Leeds .. .. ..	1 1 0	Jepson, E. G., Esq., Leeds ..	1 1 0
Baxter, Wm., Esq., Leeds ..	0 10 0	Jowitt, John, Esq., Harehills, Leeds.. .. .. ..	1 1 0
Bilbrough, J. B., Esq., Leeds..	1 1 0	Lowther, Sir Chas. H., Bart., Swillington, Leeds .. ..	2 2 0
Birchall, Edward, Esq., Leeds	1 0 0	Maude, Miss, Knowsthorpe, near Leeds .. .. ..	1 0 0
Birchall, Mrs., Whiteholme, Clitheroe .. .. ..	1 1 0	Nelson, Henry, Esq., Leeds ..	1 1 0
Conder, Rev. Dr., Leeds ..	1 1 0	Rooke, Rev. Dr., Rawdon Col- lege, near Leeds .. ..	2 2 0
Cornthwaite, Right Rev. Bishop.	1 1 0	Ryder, Charles, Esq., Chapel- Allerton, Leeds, .. ..	1 1 0
Crawford, Mrs. Emmerson,. Leeds.. .. ..	1 1 0	Seatched, Miss, Boston Spa, Yorkshire .. .. ..	0 10 6
Dalton, Edward, Esq., Garforth, near Leeds .. .. ..	1 1 0	Taylor, T. E., Esq., Dodworth Hall, Barnsley .. ..	1 1 0
Darwin, Francis, Esq., Cres- keld Hall, Otley .. ..	2 2 0	Tweedale, Mrs., Kingston-ter- race, Leeds .. .. ..	1 1 0
Embleton, T. W., Esq., Meth- ley, near Leeds .. ..	1 1 0	Willans, J. W., Esq., Head- ley, Leeds .. .. ..	0 10 6
Ferguson, Wm., Esq., Leeds ..	0 10 6	Wood, Rev. Fred. J., Head- ley, Vicarage.. .. ..	1 1 0
Good, J. G., Esq., Nottingham	1 1 0		
Hayes, Rev. W. H., Rectory, Dromore, Ireland .. ..	1 0 0		

LEITH.

Feb. 5, 1883.—By cash .. . . . £4 15s.

	£ s. d.
Messrs. James Currie & Co. ..	1 1 0
James Braidwood, Esq. ..	0 10 6
Rev. G. Jackson ..	0 5 0
Messrs. G. Gibson & Co. ..	1 1 0
James Pringle, Esq. ..	0 10 6
Rev. Dr. Thorburn ..	0 5 0
Messrs. D. J. Thomson & Co. ..	0 5 0
Messrs. John Somerville & Co. ..	0 10 6
James Wishart, Esq. ..	0 10 0
W. Wishart, Esq. ..	0 5 0
	5 3 6
Less expenses ..	0 8 6
	£4 15 0

LIST OF SUBSCRIPTIONS.

LICHFIELD.

PER MRS. BAGNALL.

Feb. 1, 1883.—By cash	..	..	..	..	..	£2.
						£ s. d.
Miss Gulson	..	..	..	..	..	1 0 0
Mrs. Selwyn	..	..	..	..	..	1 0 0

MANCHESTER.

1883.

Jan. 19.—By cash	..	..	..	..	..	£ 10 0 0
Feb. 23.—By cash	..	..	..	..	..	5 0 0
Feb. 28.—By cash	..	..	..	..	..	3 18 0
March 13.—By cash	..	..	..	..	..	1 0 0

£19 18 0

	£	s.	d.		£	s.	d.
C. P. Allen, Esq.	..	..	1 1 0	F. W. Grafton, Esq., M.P.	..	2 2 0	
R. W. Barnes, Esq.	..	..	0 10 6	Edward Hardeastle, Esq.	..	1 1 0	
Walter Bellhouse, Esq.	..	..	1 1 0	J. R. Krauss, Esq.	..	1 1 0	
Ernest Bellhouse, Esq.	..	..	1 1 0	G. Robinson, Esq.	..	1 1 0	
Rev. W. F. Birch	..	..	1 1 0	T. Rymer, Esq.	..	1 1 0	
James Barlow, Esq.	..	..	1 1 0	John Robinson, Esq.	..	2 2 0	
J. R. Barlow, Esq.	..	..	1 1 0	W. Slater, Esq.	..	1 1 0	
H. Calvert, Esq.	..	..	0 10 6	Rev. W. J. Smith	..	0 10 6	
Mrs. Cruso	..	..	1 1 0	Rev. A. McLaren	..	1 1 0	
G. H. Goldsmith, Esq.	..	..	1 1 0				

January list.—J. Napier, Esq., £1 0s. 0d., read £1 1s. 0d.

SUNDERLAND.

Feb. 17, 1883.—By cash	..	..	..	..	..	£2 2s.
J. W. Taylor, Esq.	..	..	..	..	..	1 1 0
J. W. Wayman, Esq.	..	..	..	..	..	0 10 6
Rev. J. Lyth	..	..	..	..	..	0 10 6

TUNBRIDGE WELLS.

March 19, 1883.—By cash .. .. .. .. £5 4s. 6d.

1882.

Miss Gordon	..	..	..	..	..	0 10 0
W. F. Browell, Esq.	..	..	..	..	..	1 1 0
Rev. H. J. Rhodes	..	..	..	..	..	1 1 0

1883.

Rev. H. J. Rhodes	..	..	..	..	..	1 1 0
Rev. C. B. Bowles	..	..	..	..	..	0 10 6
G. Bartram, Esq.	..	..	..	..	..	1 1 0

WHITBY.

Feb. 8, 1883.—By cash .. .. .. .. £2 15s.

£ s. d.

Mrs. Cholmeley..	..	..	..	..	..	1 0 0
E. W. Chapman	..	..	..	..	..	1 0 0
Miss Langborne..	..	..	..	..	..	0 10 0
Mrs. Richardson	..	..	..	..	..	0 5 0

## LIST OF HONORARY SECRETARIES AND LOCAL ASSOCIATIONS.

---

ALLOA : Rev. Alexander Bryson and Rev. Daniel M'Lean.

ABERDEEN : Rev. Prof. Milligan, D.D. *Hon. Sec.* Ladies' Association, Miss Mary Forbes.

ADELAIDE : Rev. W. R. Fletcher.

AMBLESIDE : Rev. H. B. Rawnsley, Wray Vicarage.

ANSTRUTHER : W. H. Mackintosh, Esq.

ARBROATH : T. B. F. Webster, Esq.

AYR : Robert Murdoch, Esq.

BASINGSTOKE : Rev. W. Marriner.

BATH : Rev. T. P. Methuen.

BEDFORD : Rev. Canon Haddock.

BELFAST : Rev. the President of Queen's College.

BIRKENHEAD : Rev. J. T. Kingsmill, St. Aidan's College.

BIRMINGHAM : Rev. F. Dell.

BISHOP'S WALTHAM : Rev. H. R. Fleming.

BLACKBURN : Herbert Birch, Esq., and Rev. A. B. Grosart.

BLAIRGOWRIE : W. S. Soutar, Esq.

BODMIN : S. Hicks, Esq.

BOLTON : George Monk, Esq.

BRECON : Richard Mills, Esq.

BRIGHTON : Rev. C. E. Douglass.

BURNLEY : Alfred Strange, Esq.

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## ERRATA.

IN QUARTERLY STATEMENT, 1882.

Page 51, line 3. *For Dr. read Drs.*

„ „ „ 41. *For Rummôn, read Rimmon.*  
„ „ „ 43. *For Rimmôn, read Rummôn.*  
„ 53, „ 39. *Before it, read 5.*  
„ 54, „ 8. *For Rimmôn, read Rummôn.*  
„ „ „ 44. *Before The, read 5.*  
„ 56, „ 4. *After Brethren, read part of.*  
„ 58, „ 4. *Omit is.*  
„ 260, „ 35. *Read fulfils.*  
„ 261, „ 29. *For D, read d.*  
„ „ „ „ *For Karbet, read Khurbet.*  
„ 262, „ 1. *For Shâja, read Shâfa.*  
„ „ „ 6. *Read diligently.*  
„ „ „ 36. *For Eshtael, read Eshtaol.*  
„ „ „ 37. *For Eshna, read Eshua.*  
„ 263, „ 4. *For the latter, read Mizpeh.*  
„ „ „ 35. *For Airo, read Ain, and for Kustril, read Kustul.*  
„ „ „ 47. *For Sherijah, read Sherifeh.*  
„ 265, „ 35. *After time, read clear.*  
„ „ „ 36. *For 6, read 26.*

1883.

Page 49, line 24, &c. *For Kirjath 'Erma, read Khurbet 'Erma.*

„ 50, „ 11. *For therefore, read there for.*  
„ „ „ 12. *Omit from The to that.*  
„ 52, „ 39. *Before □, read 1.*



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Mr. Yeats, Beaconhill by Murkle David Stewart, Esq., 259, Union Street ..	1	1	0	Alexander Cachran, Esq., 152, Union Street ..	..	..	..
Alexander Webster, Esq., M.P., Edgehill ..	0	10	6	Francis Ogston, M.D., Albyn Terrace ..	..	..	..
George Jamieson, Esq., 39, Albyn Place ..	0	10	6	Rev. J. Mitford Mitchell, Queen's Terrace ..	..	..	..
Andrew Murray, Esq., jun., 103, Union Street ..	0	10	6	Dr. Stewart, Heathcot ..	..	..	..
William Stephenson, M.D., 261, Union Street ..	0	10	6	Mrs. Parr, 12, Carden Place ..	..	..	..
Rev. James McClymont, 4, Albert Street ..	0	10	6	Mrs. Hargrave, 38, India Street, Edinburgh ..	..	..	..
James Aiken, jun., 37, Union Place ..	0	5	0	Miss Scott, Ruthrieston Lodge ..	..	..	..
James Chalmers, Esq., Westburn ..	0	10	6	Mr. Anderson, sen., and Mr. Anderson, jun., Cults ..	..	..	..
				Misses Millar, 158, Crown Street ..	..	..	..
				Robert Gerard, Esq., 97, Union Street ..	..	..	..
Carried forward	£7	4	0	Carried forward	£12	13	0
					3		

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	£	s.	d.		£	s.	d.		
Brought forward	12	13	0	Brought forward	16	15	6		
George Milne, Esq., McCombie's Court ..	0	10	6	Min Mary Forbes, Freshfield, Cults ..	0	10	0		
Alexander D. Milne, Esq., 40, Albyn Place ..	0	10	6	P. S., per ditto ..	0	10	0		
Rev. John Robson, D.D., 30, Carden Place ..	0	10	6	Rev. William Mearns, D.D., Manse Oyne ..	1	1	0		
Rev. Alex. J. N. Bannatyne, 5, Rubislaw Place ..	0	10	6	Rev. Prof. Christie, D.D., Old Aberdeen (1883-1884) ..	1	1	0		
Charles J. Burnett, Old Aberdeen ..	0	10	6	Collector's Fee ..	15	6	19	17	6
Francis Edmond, Esq., Kings-wells ..	1	0	0	To Wyllie & Sons, post-age since July, 1881 ..	8	6	1	4	0
Rev. John Davidson, D.D., Mane Inverurise, ..	0	10	0				£18	13	6
Carried forward	<u>£16</u>	<u>15</u>	<u>6</u>						

### BATH.

June 14, 1883.—By cash ..	..	..	..	..	..	..	£12	12s. 6d.	
Rev. J. Buttanshaw ..	..	..	..	..	..	..	0	10	6
Miss Buttanshaw ..	..	..	..	..	..	..	0	10	6
Rev. Preb. Wood ..	..	..	..	..	..	..	0	10	0
Rev. T. Hayes ..	..	..	..	..	..	..	0	10	0
John S. Bartram, Esq. ..	..	..	..	..	..	..	0	10	6
Rev. T. P. Methuen ..	..	..	..	..	..	..	1	1	0

### BRIGHTON.

June 7, 1883.—By cash ..	..	..	..	..	..	..	£11	1s.	
Rev. W. S. Fowler ..	..	..	..	..	..	..	1	1	0
Miss Riddig ..	..	..	..	..	..	..	5	0	0
Miss M. Riddig ..	..	..	..	..	..	..	5	0	0

### BURNLEY.

May 13, 1883.—By cash ..	..	..	..	..	..	..	£2	6s. 6d.	
Miss Howorth ..	..	..	..	..	..	..	0	5	0
J. Butterworth, Esq., J.P. ..	..	..	..	..	..	..	0	10	0
Mr. A. Strange ..	..	..	..	..	..	..	0	10	6
Donation (Lancashire and Yorkshire Railway Company)							1	1	0

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DARLINGTON.

April 16, 1883.—By cash ..	..	..	..	..	£26 1s.
					£ s. d.
Sir J. W. Pease, Bart. M.P.	..	..	..	..	5 0 0
Arthur Pease, Esq., M.P. . .	..	..	..	..	10 0 0
Miss Gurney Pease	..	..	..	..	10 0 0
Henry Fell Pease, Esq.	..	..	..	..	1 1 0

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1883.—By cash ..	..	..	..	..	£7 2s.
					£ s. d.
Mrs. Hastie, Luscar, Dunfermline	..	..	..	..	1 0 0
Dr. Duncan, 8, Ainslie Place, Edinburgh	..	..	..	..	1 0 0
Dr. Craig Maclagan, 5, Coates Crescent, Edinburgh	..	..	..	..	0 10 6
John Macfie, Esq., 9, Whitehouse Terrace, Edinburgh	..	..	..	..	0 10 6
Rev. Dr. Stuart, 7, Northumberland Street, Edinburgh..	..	..	..	..	0 10 6
Mrs. Harvie Brown, Dunipace House, Larbert ..	..	..	..	..	0 10 6
Mrs. Dalgleish, 8, Atholl Crescent, Edinburgh ..	..	..	..	..	0 10 6
John J. Dalgleish, Esq., 8, Atholl Crescent, Edinburgh	..	..	..	..	0 10 6
Miss Dalgleish, 8, Atholl Crescent, Edinburgh ..	..	..	..	..	0 10 6
Laurence Dalgleish, Esq., 22, Coates Crescent, Edinburgh	..	..	..	..	0 10 6
Colin Macvean, Esq., care of John J. Dalgleish, 8, Atholl Crescent, Edinburgh ..	..	..	..	..	0 10 6
Mrs. Lang and Miss Duncan ..	..	..	..	..	0 7 6

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FROME.

June 6, 1883.—By cash .. .. .. .. £9 2s. 6d.

	£	s.	d.	£	s.	d.
F. C. Cockey, Esq. ..	..	0	5	0	0	10 6
H. Cockey, Esq. ..	..	0	10	6	0	5 0
G. Cockey, Esq. ..	..	0	2	6	0	2 6
G. A. Daniel, Esq. ..	..	0	10	6	0	10 6
Rev. W. E. Daniel ..	..	0	10	6	1	1 0
E. Flatman, Esq. ..	..	0	10	0	0	10 6
Rev. J. Horton. . .	..	0	10	6	0	10 6
Mr. Holroyd ..	..	1	1	0	0	10 6
H. C. Houston, Esq. ..	..	0	10	6	0	10 6

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GREENOCK.

May 28, 1883.—By cash ..	..	..	..	..	£2
					£ s. d.
Rev. J. J. Bonar, D.D. ..	..	..	..	..	1 0 0
John Bonar, Esq. ..	..	..	..	..	0 10 0
James Bonar, Esq... ..	..	..	..	..	0 10 0
James and John Bonar ..	..	..	..	..	0 5 0
John Alexander, Esq. ..	..	..	..	..	0 5 0
Robert R. Raeburn, Esq. ..	..	..	..	..	0 5 0

GUILDFORD.

March 31, 1883.—By cash .. .. .. .. £9 9s.

	£ s. d.		£ s. d.
Captain Campbell ..	0 10 6	Colonel Man ..	0 10 6
J. R. Capron, Esq. ..	0 10 6	Mrs. O'Connell..	0 10 6
Lieut.-Gen. E. A. Foord ..	0 10 6	Rev. F. Paynter ..	0 10 6
E. Futvoye, Esq. ..	1 1 0	R. J. Shepard, Esq. ..	0 10 6
H. Gardner, Esq. ..	0 10 6	P. W. Spence, Esq. ..	0 10 6
Miss Hadden ..	1 1 0	D. Williamson, Esq. ..	0 10 6
G. J. Jacobs, Esq. ..	0 10 6	Mrs. W. Williamson ..	0 10 6
General Sir A. Laurence ..	1 1 0		

LEDBURY.

June 18, 1883.—By cash .. .. .. .. £4 14s. 6d.

1882.

	£ s. d.
Miss A. A. Davis, Leominster ..	1 1 0
Rev. G. H. Kerwood, Hereford ..	0 10 6
J. Wollam, Yarkhill ..	0 10 6

1883.

	£ s. d.
Miss A. A. Davis ..	1 1 0
Rev. Canon Musgrave, Ledbury ..	0 10 6
Rev. G. H. Kirwood ..	0 10 6
Rev. F. S. Stooke-Vaughan ..	0 10 6

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May 2, 1883.—By cash	..	..	..	..	..	£4 4s.
						£ s. d.
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Walter Bernard, Esq., M.D.	..	..	..	..	..	1 1 0
John Coure, Esq.	..	..	..	..	..	0 10 6
John M'Adoo, Esq. (1882)	..	..	..	..	..	0 10 6
Ditto (1883)	..	..	..	..	..	0 10 6
W. Smith, Esq.	..	..	..	..	..	0 10 6

MANCHESTER.

June 6, 1884.—By cash	..	..	..	..	..	£3 3s.
						£ s. d.
aRev. J. Chippendall	..	..	..	..	..	1 1 0
H. B. Jackson, Esq.	..	..	..	..	..	1 1 0
Ditto (Eastern Survey)	..	..	..	..	..	1 1 0
Rev. J. J. Scott	..	..	..	..	..	0 10 6
G. Gawthorp	..	..	..	..	..	0 10 6

April List, J. Kraus, Esq., for £1 1s read £1.

NORWICH.

May 21, 1883.—By cash	..	..	..	..	..	£19 8s. 6d.	£ s. d.	
							£ s. d.	
A. P. Beare, Esq. (donation)	0 10 6					aE. K. Harvey, Esq.	..	1 1 0
aRev. W. R. Collett	..	1 1 0				aC. R. Gilman, Esq.	..	1 1 0
aRev. W. F. Creeny	..	0 10 6				aR. Geldart	..	0 10 6
aMrs. James Colman	..	1 1 0				aRev. R. B. P. Kidd	..	0 10 6
aCharles Dix, Esq.	..	0 10 6				aRev. W. Kennion	..	1 1 0
aDean of Norwich	..	2 2 0				aRev. C. R. Manning	..	0 10 6
aG. C. Eaton, Esq.	..	0 10 6				aRev. G. A. Crookshank	..	0 10 6
aRev. W. Hudson	..	0 10 6				aRev. H. Petley	..	0 10 6
aMrs. Hudson	..	0 10 6				aH. S. Pattison, Esq.	..	1 1 0
aRev. Hinds Howell	..	0 10 6				aPublic Library	..	0 10 6
aF. Hildyard, Esq.	..	0 10 6				aRev. W. N. Ripley	..	2 2 0
aMrs. Hildyard	..	0 10 6				aJ. J. Winter, Esq.	..	1 1 0

RYDE, ISLE OF WIGHT.

April 20, 1883.—By cash	..	..	..	..	..	..	£3.
							£ s. d.
Gen. and Mrs. Tate	..	..	..	..	..	..	2 0 0
Miss Gillson	..	..	..	..	..	..	0 10 0
E. Knocke, Esq.	..	..	..	..	..	..	0 10 0

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June 12, 1883.—By cash .. .. .. ..	<b>£7 7s.</b>
J. H. Carpenter, Esq., Cainscross, near Stroud .. .. .. ..	<b>£ s. d.</b>
S. J. Coley, Esq., High Street .. .. .. ..	0 10 6
W. Cowle, Esq., Park House .. .. .. ..	0 10 6
W. H. C. Fisher, Esq., Rowcroft .. .. .. ..	0 10 6
James Harper, Esq., Ebley, near Stroud .. .. .. ..	0 10 6
Thomas Lancaster, Esq., Bownham House, near Stroud .. .. .. ..	1 1 0
W. H. Marling, Esq., Stanley House, near Stroud .. .. .. ..	1 1 0
T. S. Osborne, Esq., Lower Street .. .. .. ..	0 10 6
Rev. R. G. Walker, Whitehall, Stroud .. .. .. ..	0 10 6
Rev. Joseph Wilkinson, Brimcombe, near Stroud .. .. .. ..	0 10 6
L. W. Winterbotham, Esq., Rowcroft .. .. .. ..	1 1 0

### WINCHESTER.

May 31, 1883.—By cash .. .. .. ..	<b>£2 15s. 6d.</b>
Mrs. Walsh .. .. .. ..	<b>£ s. d.</b>
Miss Cornford .. .. .. ..	1 1 0
Mrs. Harden .. .. .. ..	0 10 6
Ditto (for Maps) .. .. .. ..	0 10 6
	0 13 6

### LECTURES DELIVERED.

BY REV. HENRY GEARY.

1882.	<i>Receipts.</i>			
	<b>£ s. d.</b>			
April 12th.—Norwich .. .. .. ..	17 10 0			
„ 13th.—King's Lynn .. .. .. ..	9 7 0			

BY WILLIAM PEARSON, ESQ.

Mar. 27th.—Dumfries .. .. .. ..	2 17 2
April 23rd.—Parish Church, Langbank .. .. .. ..	1 1 0
„ 27th.— „ „ Dumbarton .. .. .. ..	0 17 3
May 4th.—Glasgow .. .. .. ..	1 1 0
„ 7th.—Dumblinton .. .. .. ..	2 3 0

LIST OF SUBSCRIPTIONS.

SUPPLEMENTARY LIST.

MR. PEARSON'S LIST.

June 22, 1883.—By cash..	..	..	..	£6 15s. 2d.
				£ s. d.
<i>a</i> Alex. McNab, Esq.	..	..	..	1 1 0
Rev. — McNair..	..	..	..	0 5 0
<i>a</i> W. Stewart, Esq.	..	..	..	0 10 6
<i>a</i> James Kerr, Esq.	..	..	..	0 10 6
<i>a</i> W. A. Campbell, Esq.	..	..	..	1 1 0
<i>a</i> T. Gow, Esq.	..	..	..	1 1 0
<i>a</i> Andrew Buchanan, Esq.	..	..	..	0 10 6
<i>a</i> A. Sloan, Esq.	..	..	..	0 10 0
<i>a</i> J. G. Cooper, Esq.	..	..	..	0 10 6
<i>a</i> Rev. F. Goldie ..	..	..	..	0 10 6
<i>a</i> Rev. — Ruthoen	..	..	..	0 10 6
<i>a</i> Rev. Jas. Jeffrey	..	..	..	0 10 6

SUMMARY.

	..	..	..	£ s. d.
Subscriptions and Donations	..	..	..	186 8 6
Ditto, Supplementary List	..	..	..	6 15 2
Local Societies ..	..	..	..	226 13 6
Lectures ..	..	..	..	13 17 8
Maps, Memoirs, Books, &c.	..	..	..	251 15 1
				<hr/>
				£685 9 11
				<hr/>

ERRATA.

*January, 1883.*

For Rev. J. McKinney, *read* J. McKimey, Esq.

For Rev. O. Jones, *read* Rev. W. R. Jones.

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" Mr. Albert Thompson, 24, Elliot Street.  
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PLYMOUTH : Mr. Birmingham, Whimple Street.  
PRESTON : Mr. H. Oakey, Fishergate.  
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WHITBY : Mr. Reed.  
WINCHESTER : Messrs. Jacob and Johnson.  
WOLVERHAMPTON : Mr. J. M'D. Roebuck.  
YORK : Mr. William Sessions.

## ERRATA.

### IN QUARTERLY STATEMENT, 1882.

Page 267. 2 *Chron. xvi*, 20, with the passage itself, *should be in Roman letters.*

2 *Chron. xxiv*, 26, *should be in Roman letters.*

2 *Kings ix*, 27, 28, *should be in Italics.*

*In this verse sepulchres should read sepulchre.*

Page 268. In 2 *Chron. xxxii*, 33, *ascenth should read ascent to.*

### 1883.

Page 107, line 22. *For* are those, *read were* two.

" column 3, line 3. *After* into Egypt, *add and, indeed, himself.*

" " 8. *For* piece, *read price.*

" " 11. *For* Sechem, *read Shechem.*



# LIST OF DONATIONS AND SUBSCRIPTIONS.

JUNE 20TH TO SEPTEMBER 18TH, INCLUSIVE, 1883.

*a* denotes Annual Subscriber.

\* \* \* If any omission or mistake be observed in the following lists, the Secretary will be very glad to be informed of it, and will rectify the error in the next *Quarterly Statement*.

	£	s.	d.		£	s.	d.
<i>a</i> G. C. Ashmead, Esq...	..	0	10	6		Brought forward	50 4 6
<i>a</i> Rev. H. Allon (1880-83)	..	4	4	0	<i>a</i> W. C. Copperthwaite, Esq.		
<i>a</i> R. Ashby, Esq.	..	1	1	0	(1882-83)	..	2 2 0
<i>a</i> Rev. W. H. Askwith	..	1	1	0	<i>a</i> Mrs. Cartwright	..	0 10 0
<i>a</i> A. N. Angus, Esq.	..	0	10	6	<i>a</i> Sir W. Collins	..	2 2 0
<i>a</i> Rev. Canon Allen	..	1	1	0	<i>a</i> Rev. M. H. Close	..	5 0 0
<i>a</i> R. Beck, Esq.	..	1	1	0	<i>a</i> Miss Coleridge	..	1 1 0
<i>a</i> Mrs. Browne (1882-83)	..	1	1	0	<i>a</i> A. Curle, Esq...	..	0 10 6
<i>a</i> G. Burns, Esq.	..	7	0	0	<i>a</i> E. Crewdson, Esq.	..	1 1 0
<i>a</i> Miss Bates	..	0	10	6	<i>a</i> C. Clarke, Esq.	..	1 1 0
<i>a</i> R. Clayton Browne, Esq.	..	1	1	0	<i>a</i> M. Clarkson, Esq.	..	1 1 0
<i>a</i> R. Baron, Esq.	..	0	10	6	<i>a</i> Mrs. Cook	..	1 1 0
<i>a</i> Rev. B. Bockett	..	1	1	0	<i>a</i> Sir John Coode	..	1 1 0
<i>a</i> Rev. J. S. Broad	..	0	10	6	<i>a</i> J. Carrick, Esq.	..	1 1 0
<i>a</i> Rev. G. Bain	..	0	10	6	<i>a</i> W. Cairns, Esq.	..	1 1 0
<i>a</i> Rev. C. W. Barclay	..	1	1	0	<i>a</i> Rev. H. Caddell	..	1 1 0
<i>a</i> Rev. E. H. Bickersteth	..	1	1	0	<i>a</i> W. Cadd, Esq.	..	1 1 0
<i>a</i> T. Barelay, Fsq.	..	1	1	0	<i>a</i> Rev. W. F. Clarkson	..	0 5 0
<i>a</i> C. Butler, Esq.	..	1	1	0	<i>a</i> R. W. Dale, Esq.	..	0 10 6
<i>a</i> Rev. R. M. Berens	..	2	2	0	<i>a</i> T. O. Dutfield, Esq.	..	0 10 6
<i>a</i> Rev. E. B. Badcock (1882-83)	2	2	0	<i>a</i> Messrs. J. E. Davis	..	2 0 0	
<i>a</i> H. Brimett, Esq.	..	1	0	<i>a</i> M. C. Davies, Esq.	..	1 0 0	
<i>a</i> Dr. Brodie	..	1	1	0	<i>a</i> G. Duncan, Esq.	..	1 1 0
<i>a</i> J. Bromley, Esq.	..	0	10	<i>a</i> G. Dent, Esq...	..	3 3 0	
<i>a</i> Miss Barstow	..	0	10	<i>a</i> Captain Dumergue	..	0 10 0	
<i>a</i> Rev. W. Bruce	..	0	10	<i>a</i> W. Dawson, Esq.	..	2 2 0	
<i>a</i> C. Braby, Esq.	..	0	10	<i>a</i> Sir H. Daubney	..	1 1 0	
<i>a</i> R. H. Bothamley, Esq.	..	1	1	<i>a</i> Rev. C. R. Davey	..	1 1 0	
<i>a</i> Rev. A. Cornford	..	0	10	<i>a</i> Mrs. E. Tyrwhitt Drake	..	5 5 0	
<i>a</i> J. A. Campbell, Esq.	..	0	10	<i>a</i> Rev. W. Ewing	..	0 10 0	
<i>a</i> Miss Clay	..	1	1	<i>a</i> Rev. O. Evans	..	1 1 0	
<i>a</i> R. H. Carpenter, Esq.	..	3	3	<i>a</i> W. R. Ellis, Esq.	..	1 1 0	
<i>a</i> J. Caudwell, Esq.	..	0	19	<i>a</i> W. Edwards, Esq.	..	1 4 0	
<i>a</i> G. K. Cannington, Esq.	..	0	10	G. M. E. (donation)	..	50 0 0	
<i>a</i> Sir John Cowell	..	5	0	<i>a</i> G. T. Edwards, Esq...	..	0 10 6	
<i>a</i> A. Carson, Esq.	..	1	1	<i>a</i> Rev. L. R. Eyre...	..	1 1 0	
Rev. W. B. Capern	..	0	10	<i>a</i> Rev. W. Elton	..	1 1 0	
<i>a</i> J. Corey, Esq.	..	1	1	<i>a</i> Lord Ebury	..	2 2 0	
<i>Mrs. Collison</i>	..	1	1	<i>a</i> Rev. F. G. Eld	..	0 10 6	
Carried forward	£	50	4	6	Carried forward	£	148 9 0

LIST OF SUBSCRIPTIONS.

	£	s.	d.		£	s.	d.
Brought forward	148	9	0	Brought forward	210	0	0
<i>a</i> R. Evans, Esq. (1881-83)	..	6	6	<i>a</i> C. T. Laey, Esq.	..	0	10
<i>a</i> Miss Enderby	..	1	0	<i>a</i> Hon. and Rev. A. Legge	..	1	1
<i>a</i> Rev. H. T. Ellacombe	..	2	2	<i>a</i> H. Leach, Esq.	..	1	1
<i>a</i> W. R. Ellis, Esq.	..	1	1	Rev. R. Macpherson	..	0	10
<i>a</i> Mrs. Evans	..	2	0	T. Megaw, Esq.	..	0	10
<i>a</i> J. Forrester, Esq.	..	1	1	Miss Marriott	..	0	10
<i>a</i> P. Forbes, Esq.	..	2	2	Rev. J. S. Wilson	..	1	0
<i>a</i> S. Fry, Esq.	..	1	1	J. R. Mayfield, Esq.	..	1	1
<i>a</i> Miss Fripp	..	0	10	C. L. Methuen, Esq.	..	1	1
<i>a</i> F. Fothergill, Esq.	..	1	1	Mrs. Muir	..	1	0
<i>a</i> Miss Frith	..	1	1	Sir W. Muir	..	1	1
<i>a</i> Capt. R. M. Gillson	..	1	0	Rev. S. G. Maclaren	..	0	10
E. W. Gere, Esq.	..	0	10	R. B. Martin, Esq.	..	1	1
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<i>a</i> Mrs. G. C. Gorham	..	0	10	W. W. Moran, Esq.	..	0	10
<i>a</i> W. G. Gwynne, Esq.	..	0	10	Lieut. Mantell	..	1	1
<i>a</i> G. Gwyther, Esq.	..	0	10	Rev. J. D. Murphy	..	1	1
<i>a</i> Rev. T. Gregory	..	0	10	Rev. S. R. Macphael	..	0	10
<i>a</i> Col. Gough	..	1	0	Rev. W. T. Nicholson	..	0	10
<i>a</i> C. Gutch, Esq.	..	2	0	H. A. Norman, Esq.	..	1	1
Miss Gulson	..	1	1	Sir Charles Nicholson	..	1	0
Rev. R. G. Girdlestone	..	1	1	<i>a</i> Miss Partridge	..	1	1
T. Gaslikin, Esq.	..	0	10	<i>a</i> Miss Pim	..	2	2
<i>a</i> J. S. Green, Esq.	..	0	10	<i>a</i> Rev. D. T. Porter	..	2	0
Rev. C. E. Gregg	..	1	1	<i>a</i> J. S. Phené, Esq.	..	2	2
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<i>a</i> A. B. Grimalde, Esq.	..	0	10	T. Roberts, Esq.	..	1	1
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<i>a</i> T. F. Hayward, Esq.	..	2	0	<i>a</i> S. Scott, Esq.	..	1	1
<i>a</i> Lady Herschell	..	1	0	<i>a</i> J. Sterry, Esq.	..	1	1
<i>a</i> Mrs. Hughes	..	1	1	<i>a</i> The Misses Scott	..	1	1
<i>a</i> T. Hutcheson, Esq.	..	0	10	<i>a</i> Rev. R. Shepherd	..	0	5
<i>a</i> General Haig	..	1	0	<i>a</i> Rev. H. Segar	..	1	1
<i>a</i> Rev. L. M. Humbert	..	0	10	<i>a</i> Rev. G. H. Scott	..	0	10
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<i>a</i> W. J. Haele, Esq. (1882-83)	..	2	2	<i>a</i> Rev. Professor Sayee	..	1	1
<i>a</i> W. Hobbs, Esq.	..	1	1	<i>a</i> E. Sterling Ely, Esq.	..	1	1
<i>a</i> J. Hodgkin, Esq.	..	2	0	<i>a</i> J. Tennant, Esq.	..	1	1
<i>a</i> Miss MacInnes	..	0	10	<i>a</i> Rev. R. Tyndall	..	0	10
<i>a</i> Lady E. Knox	..	0	10	<i>a</i> J. W. Wright	..	1	1
<i>a</i> Rev. A. Kennion (1882-83)	..	1	0	<i>a</i> W. Winsford	..	0	10
Rev. Canon Lee	..	2	2	<i>a</i> Rev. G. H. Waller	..	1	1
Rev. U. L. Lang	..	0	10	<i>a</i> Mrs. Worsley	..	1	1
<i>a</i> Sydney Laurence, Esq.	..	2	2	<i>a</i> E. C. Wenley, Esq.	..	1	0
<i>a</i> Miss Legg	..	0	10	<i>a</i> Rev. H. Wilson	..	0	10
<i>a</i> N. M. MacLaren, Esq.	..	0	10	<i>a</i> Rev. Dr. Williams	..	1	0
<i>a</i> J. J. Lobb, Esq.	..	0	10	John Walker, Esq. (donation)	25	0	0
<i>a</i> Capt. Lewis (Guernsey)	..	0	10	<i>a</i> R. T. Webb	..	1	1
<i>a</i> Rev. J. C. Rust	..	0	5	<i>a</i> Miss A. M. White	..	2	2
<i>a</i> J. D. Lamb, Esq.	..	1	1				
	<hr/>				<hr/>	<hr/>	<hr/>
Carried forward	£	210	0	Total	£	286	5
			0				0

## LIST OF SUBSCRIPTIONS.

FROM COUTTS'S BOOK.

FROM COOK'S BOOK.						£	s.	d.
July 6.—Miss Bromhead..	..	..	..	..	..	1	1	0
" 12.—C. Ashton, Esq. ..	..	..	..	..	..	1	0	0
" 21.—Mrs. Guise ..	..	..	..	..	..	1	0	0
" 23.—Mrs. C. W. Willis ..	..	..	..	..	..	1	1	0
" 23.—Mrs. H. L. Gubbins ..	..	..	..	..	..	0	10	0
Aug. 1.—General Aylmer..	..	..	..	..	..	1	1	0
Brenton Collins, Esq. ..	..	..	..	..	..	2	0	0
Captain Rogers ..	..	..	..	..	..	1	0	0
Hon. Mrs. Annesley Gore ..	..	..	..	..	..	1	1	0
Mrs. F. Guise ..	..	..	..	..	..	1	0	0
C. F. Fellowes, Esq. ..	..	..	..	..	..	5	0	0
Rev. E. Hoare ..	..	..	..	..	..	0	10	6

## LOCAL SOCIETIES.

*Acknowledged in detail under special heading.*

	Accommodation in actual miles, special journey.							£	s.	d.
Alloa ..	..	..	..	..	..	..	..	3	15	6
Ayr ..	..	..	..	..	..	..	..	2	16	8
Bath ..	..	..	..	..	..	..	..	4	0	0
Birkenhead ..	..	..	..	..	..	..	..	4	13	6
Cardiff ..	..	..	..	..	..	..	..	2	12	6
Epsom ..	..	..	..	..	..	..	..	2	12	0
Falmouth ..	..	..	..	..	..	..	..	13	2	6
Ledbury ..	..	..	..	..	..	..	..	1	1	0
Lichfield ..	..	..	..	..	..	..	..	1	10	0
Manchester ..	..	..	..	..	..	..	..	6	16	6
Newport (Mon.) ..	..	..	..	..	..	..	..	5	5	0
Oxford ..	..	..	..	..	..	..	..	9	8	0
Plymouth ..	..	..	..	..	..	..	..	4	12	6
Reading ..	..	..	..	..	..	..	..	2	1	7
Shrewsbury ..	..	..	..	..	..	..	..	3	5	6
Weston-super-Mare ..	..	..	..	..	..	..	..	6	4	3
								£	73	17
								0		

## SUPPLEMENTARY LIST.

The following additional donations and subscriptions bring the list to Oct. 1st :-

							£	s.	d.
Major Clark ..	..	..	..	..	..	..	1	1	0
Rev. W. O. Clinton ..	..	..	..	..	..	..	1	0	0
Rev. F. Carrick ..	..	..	..	..	..	..	1	1	0
Rev. J. E. Carpenter ..	..	..	..	..	..	..	1	0	0
Rev. J. B. Goldberg ..	..	..	..	..	..	..	0	10	6
Mrs. Goldberg ..	..	..	..	..	..	..	0	10	6
Mrs. Bagnall ..	..	..	..	..	..	..	0	5	0
Rev. W. Fry ..	..	..	..	..	..	..	1	1	0
J. Melrose, Esq. ..	..	..	..	..	..	..	5	0	0
General Gordon, R.E. ..	..	..	..	..	..	..	1	1	0
Rev. J. R. Wigham ..	..	..	..	..	..	..	0	10	6
Rev. M. Tucker ..	..	..	..	..	..	..	2	0	0
							£15	0	6

LIST OF SUBSCRIPTIONS.

SUMMARY.

					£ s. d.
Donations and Subscriptions	..	..	..	..	286 5 0
Local Societies	..	..	..	..	73 17 0
Coutts's Book	..	..	..	..	16 4 6
Supplementary List	..	..	..	..	15 0 6
Lectures	..	..	..	..	35 18 6
Maps, Memoirs, and Books	..	..	..	..	149 1 5
					<hr/> <hr/>
					£576 6 11

ALLOA.

July 20, 1883.—By cash	..	..	..	..	£3 15s. 6d.
Rev. Robert McLean, Kilkergan	..	..	..	..	£ s. d.
Rev. Daniel McLean, Alloa	..	..	..	..	0 10 6
A. Moir, Esq., Alloa	..	..	..	..	0 12 6
A. P. Forrester Paton, Esq., Alloa	..	..	..	..	0 10 6
Robert Proctor, Esq., Alloa	..	..	..	..	0 10 6
John Duncan, Esq., Alloa	..	..	..	..	0 10 6
Dr. Milne, Alloa	..	..	..	..	0 10 6

AYR.

June 27th.—By cash	..	..	..	..	£2 16s. 8d.
Miss Aytown, Esq.	..	..	..	..	£ s. d.
D. Currie, Esq.	..	..	..	..	0 10 0
John Flint, Esq.	..	..	..	..	0 5 0
Campbell Douglas, Esq.	..	..	..	..	0 10 6
R. D. Murdock, Esq.	..	..	..	..	0 10 6
					1 1 0

BATH.

July 2, 1883.—By cash	..	..	..	..	.. £1.
Rev. H. H. Winwood	..	..	..	..	£ s. d.
Charles Timms	..	..	..	..	0 10 0
Miss Holme	..	..	..	..	0 10 0
Miss A. Holme	..	..	..	..	0 10 6
Miss P. Christie	..	..	..	..	0 10 6
Miss Darlot	..	..	..	..	1 1 0
					0 5 0

CARDIFF.

Sept. 24, 1883.—By cash	..	..	..	..	£2 12s. 6d.
The Very Rev. the Dean of Llandaff	..	..	..	..	£ s. d.
William Adams, Esq., Park Place, Cardiff	..	..	..	..	1 1 0
Charles Truscott, Esq., St. Austell	..	..	..	..	0 10 6

LIST OF SUBSCRIPTIONS.

EPSOM.

1883.—By cash .. .. .. .. .. .. £2 12s.	£ s. d.
	£ s. d.
<i>a</i> Isaac Braithwaite, Esq. .. .. .. .. .. .. 1 1 0	
<i>a</i> Mrs. Butcher .. .. .. .. .. .. 1 1 0	
Mrs. Browne .. .. .. .. .. .. 0 10 0	

FALMOUTH.

Sept. 8, 1883.—By cash .. .. .. .. £13 2s. 6d.

	£ s. d.		£ s. d.
Edward Banks, Esq. .. .. 0 10 0		Francis Edward Fox .. ..	1 1 0
Rev. J. H. Bennett .. .. 0 5 0		R. Reynolds Fox .. ..	1 1 0
Edmund Carlyon, Esq. .. .. 2 2 0		A. Lloyd Fox .. ..	1 1 0
Rev. J. Lemon Church .. .. 0 10 0		Rev. George Hext .. ..	0 10 6
Miss Emrys .. .. 1 0 0		Mrs. Hodge .. ..	0 10 0
Rev. W. Fookes .. .. 0 10 0		Mrs. Peter .. ..	0 10 0
Miss Fox .. .. 1 1 0		Rev. W. Rogers .. ..	1 0 0
Robert Fox .. .. 1 1 0		Rev. Canon Rogers .. ..	0 10 0

LEDBURY.

	£ s. d.
Rev. O. M. Ridley .. .. .. .. .. .. 1 1 0	

LICHFIELD.

July 2.—By cash .. .. .. .. .. ..	£1 10s.
	£ s. d.
<i>Mrs. Seckham</i> .. .. .. .. .. .. 0 10 0	
— Bagnall .. .. .. .. .. .. 1 0 0	

MANCHESTER.

August 5.—By cash .. .. .. .. .. ..	£1 11s. 6d.
„ 31.— „ .. .. .. .. .. ..	£5 5s. 0d.
	£ s. d.
<i>a</i> Rev. Wm. Laycock .. .. .. .. .. .. 0 10 6	
<i>a</i> Mrs. Gillmore .. .. .. .. .. .. 0 10 6	
<i>a</i> G. W. Rigg, Esq. .. .. .. .. .. .. 0 10 6	
<i>a</i> Rev. H. S. Byrth .. .. .. .. .. .. 0 10 6	
<i>a</i> J. F. Robinson, Esq. .. .. .. .. .. .. 1 1 0	
<i>a</i> F. Chorlton, Esq. .. .. .. .. .. .. 0 10 6	
<i>a</i> Richard Taylor, Esq. .. .. .. .. .. .. 1 1 0	
<i>a</i> F. H. Leedham, Esq. .. .. .. .. .. .. 1 1 0	
<i>a</i> Rev. A. E. Robinson .. .. .. .. .. .. 1 1 0	

LIST OF SUBSCRIPTIONS.

NEWPORT (MON.).

Sept. 24, 1883.—By cash ..	..	..	..	..	£7 7s.
The Right Hon. Lord Tredegar, Tredegar Park ..	..				£ s. d.
Octavius Morgan, Esq., The Friars ..	..	..	..	..	1 1 0
H. J. Davis, Esq. ..	..	..	..	..	1 1 0
F. L. Justice Esq. ..	..	..	..	..	0 10 6
C. B. Holland, Esq., Ebbw Vale ..	..	..	..	..	0 10 6
William Graham, Esq., Clytha Park ..	..	..	..	..	0 10 6
T. D. Roberts, Esq., The Grove ..	..	..	..	..	0 10 6
" " (for Great Map) ..	..	..	..	..	1 1 0
					2 2 0

OXFORD.

August 20, 1883.—By cash ..	..	..	..	..	£9 8s. 0d.
1881.					
Aug. 8.—Mrs. Bayly ..	..	..	..	..	£ s. d.
1882.					
Jan. 10.—Mrs. Bellamy ..	..	..	..	..	1 1 0
„ 13.—Dr. Hearthley ..	..	..	..	..	2 2 0
July 27.—Mrs. Bayley ..	..	..	..	..	1 1 0
1883.					
Jan. 3.—Dr. Hartley ..	..	..	..	..	1 1 0
„ 5.—Mrs. Bellamy ..	..	..	..	..	2 2 0
Mar. 5.—Miss S. Bridges ..	..	..	..	..	1 0 0

PLYMOUTH.

By cash ..	..	..	..	..	..	£4 12s. 6d.
Per W. C. Nicholson, Esq. ..	..	..	..	..	..	£ s. d.
Mrs. Woodhouse ..	..	..	..	..	..	0 10 6
H. B. S. Woodhouse ..	..	..	..	..	..	0 10 6
Collected as per list ..	..	..	..	..	..	1 1 0
						2 10 6

	£	s.	d.		£	s.	d.		
Miss E. P. Martin ..	..	0	2	0					
D. McK. ..	..	0	2	0	Brought forward	1	4	0	
Mrs. Guswell ..	..	0	2	6	H. A. W. ..	..	0	5	0
W. Angear, Esq. ..	..	0	2	6	L. W. ..	..	0	5	0
Thos. Goard, Esq. ..	..	0	5	0	T. Pitts, jun., Esq. ..	..	0	5	0
W. Short, Esq. ..	..	0	2	6	J. Carkeet, Esq. ..	..	0	2	6
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Wm. King, Esq. ..	..	0	2	6	W. J. White, Esq. ..	..	0	2	0
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